the 'Proceedings of the Zoological Society,' 1841, p. 86, under the name of Dactylocalyx pumiceus, in these words:—"Sponge fixed, siliceous; incurrent canals uniform in size; excurrent canals large, forming deep sinuosities in the outer surface, radiating from the root to the outer circumference." Comparing the sponge now described with Dr. Gray's, I find in mine no well-marked system of incurrent and excurrent canals with large orifices, as in the Barbadian sponge, which latter is of a much more open and porous texture, and besides exhibits in its present state not the slightest trace of a skin.

Dedicated to Dr. J. S. Bowerbank, F.R.S., who has devoted his attention for many years to the Spongiadæ, and who is now giving to the scientific world, through the medium of the 'Philosophical

Transactions,' the results of his important investigations.

8. CATALOGUE OF THE BIRDS OF CHINA, WITH REMARKS PRINCIPALLY ON THEIR GEOGRAPHICAL DISTRIBUTION. BY ROBERT SWINHOE, F.Z.S.

PSITTACIDÆ.

- 1. PALÆORNIS ROSA, Bodd.
- P. bengalensis, Briss. P. cyanocephalus, L.
- P. flavicollaris, Frankl.; Jerdon, Birds of India, i. p. 259.

Two pairs of this species were shot, out of a flock in autumn near Canton, by Dr. Dod, two of which were kindly given me by that gentleman for identification. This is the only well-authenticated instance of the occurrence of any of the Parrot-group in China. The Chinese call all Parrots "Ying-ko," and import various species from the Straits as cage-birds.

FALCONIDÆ.

- 2. Aquila Heliaca, Savigny.
- A. imperialis, Cuv.

A. mogilnik, Gr.; Bp. Consp. Av. p. 13.

An immature male of this species was shot at the close of 1861, near Foochow, by Mr. A. Andrews. The specimen was identified by Mr. J. H. Gurney. I have lately received a letter from Mr. Andrews informing me that he had this last winter shot another Eagle, a female, probably of the same species as the first, at Foochow.

3. Haliaëtus albicilla, L.

Hab. Amoorland (v. Schrenck, Amurland, p. 223).

Captain Blakiston's expedition-party shot one on the 23rd of February at Chinkiang, on the Yangtsze, the head and leg of which were brought home and identified by Mr. J. H. Gurney. I once saw a large Sea-Eagle in the month of December at Amoy, which I believe to be of this species; and I was assured of its occasional

occurrence during the same season at Hongkong by the late Dr. Harland, a most diligent and accurate observer, whose collections in the various branches of natural history at present enrich the Museum of Scarborough, his native place.

4. Haliaëtus pelagicus, Pall.

Hab. Sea-coasts of the Amoorland, Mantchuria, and Japan. Not hitherto observed in China.

5. PANDION HALIAËTUS, L.

Hab. Amoorland (v. Schrenck) and Japan. Abundant on all the rivers and bays of Formosa and China. The Chinese and Formosan specimens are rather smaller than those from Europe.

6. Poliornis poliogenys, Temm.

Buteo pyrrhogenys, Schleg. Faun. Jap.

Originally described from Japan; since procured at Tientsin by Mr. Fleming, R.A. (see P. Z. S. 1862, p. 315; and The Ibis, 1863, p. 88).

7. Buteo japonicus, Schleg. Faun. Jap. t. 6; Bp. Consp. Av.

p. 18.

Closely allied to the European Buzzard, but never acquires the dark plumage of the adult of that bird. Its tarsi, moreover, as Bonaparte remarks in his 'Conspectus Avium,' are more feathered. Found in Amoy, Hongkong, and Canton, in the winter only.

8. MILVUS MELANOTIS, Schleg.

M. govinda, Sykes, of some of my lists of Chinese Birds in The Ibis. M. niger, var. melanotis, von Schrenck, Amurland.

Found throughout China, from Canton to Talien Bay, in the Amoorland, in Japan, and in Formosa.

9. FALCO SACER (Schleg.), Bp. Consp. Av. p. 24.

Procured by myself at Pekin (see The Ibis, 1863, p. 88).

10. FALCO PEREGRINUS, L.

Occurs from Canton to the Amoor. Found also in Japan and Formosa.

11. FALCO SUBBUTEO, L.

Found in Amoorland, according to v. Schrenck. I have seen specimens from Tientsin, Hankow (Central China), Foochow, and Amoy.

12. FALCO VESPERTINUS, L.

Found in Amoorland (v. Schrenck), in Talien Bay, and in the neighbourhood of Pekin.

13. FALCO ÆSALON, L. Merlin.

I have seen specimens from Pekin, Amoy, and Foochow.

14. TINNUNCULUS JAPONICUS, Schleg. Faun. Jap. t. 1, 1a; Bp. Consp. Av. p. 27. Japanese Kestrel.

Common in South China and Formosa; somewhat rare about Pekin. The Kestrel mentioned by v. Schrenck as occurring somewhat scantily in Amoorland is probably the same. I have, however, one specimen from Amoy, in which the colours are lighter and clearer, and the back considerably less spotted, as in the *T. alaudarius* of Europe.

15. ASTUR PALUMBARIUS, L. Goshawk.

This bird is found in the neighbourhood of Pekin. I have there seen it carried on the wrist by natives for the purposes of hawking. It is noted by von Schrenck as found in Amoorland.

16. Accipiter nisus, L. Sparrow-Hawk.

Occurs from Canton to the Amoor; also in Japan.

17. MICRONISUS SOLOËNSIS, HORSÍ.

Falco cuculoides, Temm. Pl. Col. 110, 129; Bp. Consp. Av. p. 33.

I have seen specimens from Amoy, Foochow, and Tientsin. A good mark of distinction in this species, as pointed out by Mr. J. H. Gurney, is the clear unspotted cream-colour of the axillaries.

18. MICRONISUS GULARIS, Schleg.

I have seen skins from Amoy and Formosa. It inhabits also Japan, whence originally described and figured in the 'Fauna Japonica.'

19. MICRONISUS STEVENSONI.

Accipiter stevensoni, Gurney, Ibis, 1863, p. 447, pl. 11.

A resident species at Hongkong, Canton, and Macao. One specimen received from Tientsin.

20. CIRCUS CYANEUS, L.

From Canton to the Amoor.

21. CIRCUS SWAINSONII, A. Smith.

C. pallidus, Sykes.

A female specimen of this was procured by Captain Blakiston on the Yangtsze, and identified by Mr. Gurney.

22. CIRCUS MELANOLEUCUS, Pennant.

Procured by Mr. Fleming, R.A., at Tientsin. Probably extends throughout the interior of China, as it is common in the plains of Hindostan.

23. CIRCUS SPILONOTUS, Kaup; Swinhoe, Ibis, 1863, p. 213, pl. 5.

Found in South China; especially abundant in the neighbourhood of Amoy. Has also been procured from Singapore and the Philippines.

STRIGIDÆ.

- 24. ATHENE CUCULOIDES, Vigors; Bp. Consp. Av. p. 40. From Canton to Ningpo.
- 25. NINOX JAPONICUS.

Strix hirsutajaponica, Schleg. Faun. Jap. t. 9; Bp. Consp. Av. p. 41.

From Amoy to Tientsin; found also in Formosa. Originally described from Japan.

26. KETUPA CEYLONENSIS, Gmel. Crab-Owl.

Procured only from the hills of Hongkong. Abundant in Ceylon and in many parts of India.

- 27. Scops semitorques, Schleg. Faun. Jap.
- S. lempiji, var. lettia, Hodgs., Blyth's Catalogue.

South China; as yet only traced from Canton to Foochow, thence across to Formosa. Also in Japan, and throughout the hilly regions of India. Is replaced in the Malayan peninsula by the allied S. lempiji, Horsf.

- 28. Scops japonicus, Schleg.; Bp. Consp. Av. p. 48.
- S. bakkamæna, Penn.

From Canton to Peking; also in Japan. Occurs in South China in winter, and is found in Tientsin during summer. I procured it at Amoy twice, and have seen it on several occasions in winter only, and Captain Blakiston procured one at Canton on the 15th of November; hence I infer it to be a bird of passage, spending the summer in North China and Japan, and wintering in South China. Is probably the same as the bird of Hindostan, S. bakkamæna, Penn.; at least it has been so identified by Mr. E. Blyth.

29. Bubo MAXIMUS, Sibbold. Great Horned Owl.

B. atheniensis (Aldrov.), Bp. Consp. Av. p. 48. Strix bubo, L.; von Schrenck, Amurland, p. 249.

From Canton to Talien Bay, and thence on to the Amoor. In many parts of China it is by no means rare throughout the year.

30. OTUS VULGARIS, Flem. Long-eared Owl.

Otus vulgaris, Bp. Consp. Av. p. 50.

Strix (Ægolius) otus, L.; v. Schrenck, Amurland, p. 246.

Procured by Mr. Fleming at Tientsin. Found in Amoorland (v. Schrenck), and more or less common in many parts of China proper.

31. Otus brachyotus (Gmel.). Short-eared Owl.

Brachyotus palustris, Bp. Consp. Av. p. 51.

Strix (Ægolius) brachyotus, v. Schrenck, Amurland, p. 246.

From Canton to the Amoor.

32. Syrnium sinense, Lath.; Bp. Consp. Av. p. 52.

Said to have been received from Canton. I have never come across the bird.

CAPRIMULGIDÆ.

33. CAPRIMULGUS JOTAKA, Schleg.

C. dytiscivorus, Swinhoe, Ibis, 1860, p. 130.

C. swinhoii, Blyth.

Tarsi feathered; allied to C. europæus, L.

Summers in North China and Japan; common in South China, chiefly in spring and autumn; when in its migration it spends two months in Amoy and Hongkong. Old birds very black, with much less buff markings. White spots on the primary quills of male very variable in size. White band on tail also variable in breadth, and at different distances from tip in different specimens. In the freshly moulted males both are strongly tinged with buff.

The female has no band across the tail, and the spots on the underneck and wings are rust-coloured instead of white. Her whole

plumage is much more rufescent.

Both sexes in the very young plumage have no spots on the wings or tail, the throat of the male alone showing whitish patches.

34. CAPRIMULGUS STICTOMUS, Swinhoe, Ibis, 1863, p. 250.

Tarsi bare; allied to *C. monticola* of India and *C. affinis* of Java. Outer tail-feathers in male white. Spends the summer in the south of China; found near Amoy in September and October. Amoy specimens very rufescent and clearly marked. Formosan variety smaller and very pale.

CYPSELIDÆ.

35. ACANTHYLIS CAUDACUTA, Lath.

Hirundo fusca, Shaw. Chætura australis, Steph.

C. macroptera, Sw. C. nudipes, Hodgs.

Cypselus leuconotus, Deless.

Hirundo ciris, Pall. Zoogr. Ross. Asiat. p. 541.

Most naturalists are, I believe, now agreed that the Himalayan and Australian birds are one and the same species, and identical with the individual that was shot in England. In the south of China I never saw but one pair; the male I secured. This specimen agrees entirely with Australian skins. Von Schrenck observed this Swift in Amoorland; and it is doubtless the bird described by Pallas as Hirundo ciris.

36. Cypselus vittatus, Jard. & Selb. Ill. Orn. n. s. t. 39.

Closely allied to *C. pacificus*, Lath. (*C. australis*, Gould). Sexes of similar plumage; wings and tail of variable length in both, in the former seldom more than $\frac{1}{2}$ inch difference between two specimens.

Found as a summer visitant in China, from Amoy to Talien Bay; also in Formosa. Not noticed in von Schrenck's 'Amurland.'

37. Cypselus subfurcatus, Blyth, J. A. S. xviii.

C. affinis, var., Strickland, P. Z. S. 1846, p. 99.

Larger than *C. affinis*, J. Gr., and of a much blacker and glossier colour, with much more white on the throat; tail longer and subfurcate. Approaches *C. vittatus* more nearly than *C. affinis* does. Sexes alike. Wings vary somewhat in length in individuals. Resident on the Chinese coast not much higher than Amoy, whence it ranges southwards to Malacca. Found also in southern Formosa.

UPUPIDÆ.

38. Upupa epops, L.

U. vulgaris, Pall.

A resident bird throughout China, from Canton to Talien Bay. Found also in Amoorland, according to von Schrenck. Chinese specimens identical with the European bird. Some individuals are strongly imbued with a rufous tinge. The young are at once distinguishable by their much shorter bills. Builds in holes of walls and exposed Chinese coffins. The younglings call for food with a hissing note. The male during the breeding-season utters its song of love, "Hoohoo-hoo." To produce these notes the bird draws the air into its trachea, which puffs out on either side of the neck, and the end of the bill is tapped perpendicularly against a stone or the trunk of a tree, when the breath being forced down the tubular bill produces the correct sound. I have watched a male crying on a rope, where, instead of striking its bill, it merely jerked its head. The song then given forth was quite different, sounding more like "hoh-hoh-hoh." Feeds on worms, for which it stamps the ground with its feet, clutching them by the head with its bill. It bruises the worm by beating it against the ground, and then, throwing up its head, jerks it down to its small mouth, and finally swallows it.

CUCULIDÆ.

39. EUDYNAMYS ORIENTALIS.

Cuculus orientalis, niger, mindanensis, et scolopaceus, L. C. maculatus, Gmel.

A summer visitant to the extreme south of China; common about Canton. I have a specimen from Swatow; but I do not think it ranges much higher. I have never found it at Amoy. For an account of the bird as observed at Canton, see The Ibis, 1861, p. 46.

40. Cuculus canorus, L.

I have a series of each of two forms from China, both of which Mr. Blyth refers to C. canorus. I have a skin from Tientsin, one from Peking, and a third from Foochow—all undoubtedly true C. canorus, with white underparts banded with narrow bars, and the axillaries

also similarly banded. On the Foochow hills I have heard the true Cuckoo-note in June. Of the second series, I have one from Tientsin, and four from Amoy. These are of similar form, with fulvescent under parts banded with much broader bars more widely set, with the axillaries nearly barless. One has a somewhat large bill, and two are almost entirely blackish brown in the parts which should be grey. I have never heard the notes of the race that touches in greatest abundance at Amoy in its migrations, and therefore will not attempt at present to separate it. It may be found, on further acquaintance, worthy of specific distinction. This variety is not noted in Jerdon. The true Cuckoo is very variable in tints, length of wing, and size of bill, and even in my small series leads away to the following allied forms (which, however, differ from it in note) in such a manner that I can hardly help thinking that the various races interbreed, the offspring probably studying the note of that parent to which its inherited form most assimilates, and to the society of which it is on that account attracted. The straggler which I procured in south-west Formosa belongs to the second variety.

41. Cuculus Himalayanus, Vigors (not of Gould's 'Century,' which = C. poliocephalus, Lath.).

C. saturatus, Hodgs.

I have an individual of this Cuckoo, shot at Amoy on its vernal northward migration. It has been identified by Mr. Blyth, and answers well to Jerdon's description (Birds of India, i. p. 323). It is of similar form to *C. canorus*, but is smaller and much more deeply and brightly coloured. I have never observed it alive; but some remarks on its habits and peculiar note are given in the work referred to.

42. Cuculus micropterus, Gould.

Of this I have also one shot at Amoy, in the neighbourhood of which place it is frequently seen and heard in spring. It is a plaindressed species, with very broad and widely set bars on the under parts; smaller than *C. canorus*, with rather a large bill (see Jerdon, Birds of India, i. p. 326, where an account of its note and habits are given).

43. Cuculus hyperythrus, Gould.

I have only an immature bird, from Shanghai, the locality whence Mr. Gould procured his typical specimen. This is a much more powerful bird than *C. canorus*, with short wings and heavy bill. The plumage of my bird is brown on the upper parts, with the yellowish mottling of immaturity. The under parts are fulvous, barred at long intervals with black, but there are deep-rust-colour indications of a change into what should be the plumage of the adult bird.

44. Hierococcyx fugax.

Cuculus fuyax, Horsf. Linn. Trans. xiii. Cuculus sparverioides, v. Schrenck, Amurland, i. p. 24, t. 10.

This abnormal form of Cuckoo, with peculiar bill and somewhat graduated tail, is ably described by von Schrenck in the work above noted, but wrongly referred to the much larger Himalayan type. It is also noticed in Jerdon's 'Birds of India,' p. 331. I have seen it in Hongkong in April; but have, unfortunately, only one individual in hepatic or rufous plumage from Manilla, and must therefore direct my readers to von Schrenck's work, with the caution, however, that the bird there figured is not in the plumage of the adult. species of Cuckoo is, curiously enough, spotted and streaked instead of being barred on the under parts. I have to thank Mr. Blyth for drawing my attention to Dr. Horsfield's type specimen in the E. I. C. Museum, from the Straits, which appears identical with our bird.

45. Polyphasia tenuirostris.

Cuculus tenuirostris, Gray.

A summer visitant to the south of China, though some few stay very late. I have an adult male, shot at Amoy on the 9th of December 1857. Chinese specimens agree almost entirely with those from India; but their tints are usually of a higher tone, the grey runs lower down on the breast, the under parts are more brightly rufescent, there is much more whitish on the edge of the carpus, and much less white on the under wing. The bills and wings of my specimens vary somewhat in length. Like the larger Cuckoos, this bird in the adult plumage often exhibits bars of red on the upper parts; and frequent cases of the rufescent or hepatic plumage occur. I have one adult male which is of a fine chestnut-red on the upper parts barred with bronze-black, the under parts being rufous barred with black and white. One specimen in the partial hepatic plumage has an admixture of grey on the lower parts, showing a tendency to the allied P. nigra of Hindostan. The notes of the Indian P. tenuirostris would appear, according to Jerdon, to differ from those of our summer visitant.

46. CENTROPUS VIRIDIS, Scopoli.

C. bengalensis, Gmel.

C. lepidus, Horsf. C. affinis, Horsf.

C. tolu, Raffles.

C. pumilus, Lesson, &c. (see Jerdon, Birds of India, i. p. 350).

This small Lark-heel is a resident species in South China, being chiefly confined to islands. It is somewhat rare on the main, where the large species abounds. In Formosa it is the only species. (See The Ibis, 1861, p. 48.)

47. Centropus rufipennis, Illiger.

(For synonyms, see Jerdon, Birds of India, i. p. 348.)

C. sinensis, of my "Canton List," Ibis, 1861, p. 49.

C. eurycercus, A. Hay.

The large Lark-heels from India, Malacca, and China have been

considered as three distinct species. The first I have received from Mr. Blyth, the second from Siam through the kindness of Sir R. Schomburgk, and I have a large series from Canton and Foochow. In size, form of bill, and proportion of wings and tail-feathers, the bird is as variable as in the distribution of black bars on its upper plumage. I have skins showing quite as narrow tails as in C. ruftpennis of India, and others displaying even broader rectrices than in the C. eurycercus from Siam. I have thus been compelled to unite them together. The habits as well as the notes of the species observed by myself tally closely with Jerdon's remarks, with the exception of what he states of the nest. I have never found the nest domed as is that of C. viridis. It is shaped like a long narrow basket, made almost entirely of fresh grass, suspended in the centre of a thick hedge, and usually contains four pure-white eggs, ovate and not roundish as those of its small ally. This Crow-pheasant is a resident bird in South China, ranging a few hundred miles above Foochow, —not quite so far north, I think, as Ningpo.

PICIDÆ.

48. YUNX TORQUILLA, L.

Yunx japonica, Bp. Consp. Av. p. 112.

Summers in North China, the Amoor, Kamtschatka (v. Schrenck), and Japan, and winters in South China, at which season it is very common at Amoy. Lives almost entirely on ants. Specimens very variable as to tints, spots, and markings. This Eastern form is rather smaller, and offers a few peculiarities distinguishing it from the European bird, but scarcely sufficient to cause it to be recognized as anything more than a race of the European type.

49. MICROPTERNUS FORIENSIS, Swinhoe, P. Z. S. 1863, p. 87.

Allied to *M. phaioceps*, Blyth, of India, and *M. badius*, Raffles, of Java, which form Bonaparte and Malherbe's genus *Phaiopicus*. Procured at Foochow, where it is a resident species, and probably extends throughout Southern China. I may here remark that a Sumatran specimen received from Professor Schlegel, labelled *P. brachyurus*, Vieill. (*P. badius*, Horsf.), is much larger than my Malacca specimens so named by Mr. Blyth, and has the throat strongly mottled with blackish brown, as is the *M. gularis*, Jerdon, of South India and Ceylon; but the various brown species with red spotted cheeks in the male are so intimately connected by intermediate forms from intermediate localities, that, like the *Picus major* group, they cannot be regarded as more than local races. *M. badiosus*, Temm., of Borneo, which I have also received from Professor Schlegel, seems however to establish its own distinctness by the red markings of the male extending in specks to the eyebrow and occiput.

50. GECINUS CANUS, Gmelin.

Picus chloris, Pallas.

North China, about Pekin, where common; also Amoorland (v. Schrenck).

51. GECINUS GUERINII, Malherbe.

Originally described from specimens from Shanghai. Procured by Captain Blakiston on the Yangtsze, near Shanghai. Differs chiefly from *G. canus* in its smaller size, in its deeper and more olive plumage, in its larger frontal red patch, and in having a black-marked occiput.

52. GECINUS TANCOLA, Gould, P. Z. S. 1863; Swinhoe, Ibis, 1863, p. 389.

Allied to G. occipitalis. The young in the nest are similar to their parents in colour and markings, showing the usual sexual distinction; in this respect they differ from G. viridis, which has an immature dress. I have a young pair (male and female) taken, with the male parent, from a tree on the Pehling Mountains, near Foochow. This species ranges over the higher hills of South China and Formosa.

G. guerinii, from an intermediate locality, is quite intermediate between this and the true G. canus. In G. canus the black on the crown shows itself in faint streaks; in G. guerinii it becomes marked, and extends in a patch to the occiput; in G. tancola it is much more extensive. In the same way the black moustache-streak, indistinct and disconnected in the first, is more connected in the second, and in the third a broad black line. In fact, part with part compared, the entire plumage of G. guerinii takes an intermediate position between the two. Nevertheless specimens of G. canus from Pekin are identical with European specimens, and show the barred immature plumage.

53. Picus mandarinus, Malherbe.

P. luciani, P. gouldii, P. cabanisi, Malherbe, Mon. Picidæ.

For remarks on this group of Chinese Woodpeckers, see P. Z. S. 1863, p. 88. Races of this variable bird are found throughout China, from Canton to Pekin. The further north they extend the whiter and more spotted they become, until the Amoorland is reached, where von Schrenck reports the form identical with *P. major* of Europe.

54. Picus scintilliceps, Swinhoe, Ibis, 1863, p. 96.

Belongs to the spark-headed group of small Pied Woodpeckers, of which numerous species are recorded. Common about Pekin. A smaller and browner species occurs in Japan (the *P. kisuki* of the Faun. Jap.); and the form is represented in Formosa by a species allied to the Chinese bird—my *P. kaleënsis* (see The Ibis, 1863, p. 390).

55. Picus hyperythrus, Vigors, var. poliopsis, Swinboe.

Abundant near Pekin. The Chinese bird is too close to that of the Himalayas to be considered more than a variety of that bird (see Ibis, 1863, p. 96). Its back is more barred with white, and it has less rufous on the sides of the neck.

CAPITONIDÆ.

56. MEGALÆMA VIRENS, Bodd.

Bucco grandis, Gmel.

Inhabits wooded hills of Southern China, and the Himalayas. have received specimens from the neighbourhood of Foochow, and Captain Blakiston shot it on the 16th of March near Canton.

ALCEDINIDÆ.

57. HALCYON SMYRNENSIS, L.

H. fuscus, Jerdon, Birds of India, i. p. 224.

A common resident species from Canton to the River Yangtsze.

58. HALCYON ATRICAPILLA, Gmel.

H. pileata, Gray ex Bodd.; Bp. Consp. Av. p. 155.

Also a resident species from Canton to the Yangtsze.

59. ALCEDO BENGALENSIS, Gmelin.

A. ispidioides, Lesson.

Found throughout Eastern Asia to the Amoor, in Japan, and in Formosa. In the female the plumage is not so brilliant; but the chief sexual distinction is her pale-yellowish-red under mandible, which is always black, like the rest of the bill, in the male and young bird. This I have found a constant character in the Chinese bird, but I do not see it remarked in Jerdon's account of this species, nor yet in v. Schrenck's 'Amurland.' The bill of the young bird is tipped paler; its breast is washed with a dingy bluish grey, almost black in some individuals; the rufous has only a slight admixture of yellow; and the upper plumage is paler and dingier. I suspect that the mandibular distinction of the female will also be found to hold good in the European Alcedo ispida, L., and I would call the attention of British ornithologists to the fact.

60. CERYLE RUDIS, L.

Found about all rivers in South China from Canton to Foochow; does not extend so far north as Shanghai. The males carry two bands across the breast. In very mature males the throat and underneck are spotted thickly with round black spots. In spots and particular markings my specimens vary a good deal.

CORACIIDÆ.

61. Eurystomus orientalis, L.

A summer visitant to Southern China; procured at Canton and Foochow. At the latter port a male used to perch for the greater part of the hot spring days on the top of a flagstaff, whence it

uttered its loud unmusical notes, springing at intervals into the air, and after throwing a somerset returned to its post. This action was not performed in the pursuit of insect food, but apparently in play. For a further account of its habits see The Ibis, 1861, p. 31.

CERTHIIDÆ.

62. TICHODROMA MURARIA, L.

A specimen of a bird answering to this was shot by Mr. Consul Gingell on the mountain-plateau near Foochow during winter. The bird was accurately described to me by that gentleman, but I did not see the specimen. I have never met the bird myself in China.

Certhia familiaris, L., is given from Amoorland and Japan. We

should therefore expect to meet with it in North China.

PARIDÆ.

- 63. PARUS MINOR, Schleg. Faun. Japon.; and
- 64. PARUS CINEREUS, Vieill.

The first of these is the form found in Japan and from Chefoo (Shantung promontory) down to Foochow. It is easily distinguished from the second by its greenish-yellow back and its smaller bill. P. cinereus is the form ranging over India and its archipelago, and has a grey back. In Amoy we get the typical P. minor, and others with grey backs, resembling the P. cinereus, but with the smaller bill of P. minor. Between these two every stage of yellow and grey back can be procured out of the same party of Tits. In Canton occasional specimens of true P. cinereus occur, but the most ordinary form is the variety oscillating between the two species. Most Canton specimens have, however, larger bills. I have never seen the typical P. minor shot so far south as Canton; and Mr. Blyth tells me that he has never heard of the yellow-backed form being found in the Indian countries. Hence it is but fair to consider the two extreme forms as good species, and allow that they interbreed on the boundaries of their respective localities, and blend into one another gradually and almost imperceptibly. The large P. major, L., is said by Pallas to extend throughout Siberia to Kamtschatka.

65. Parus kamtschatkensis, Bp.

P. borealis, Selys ?.

P. palustris, var. borealis, von Schrenck, Amurland.

P. palustris, Swinhoe, Ibis, 1861, p. 331.

This form of the Marsh-Tit prevails from Peking to Amoorland. I have met no Marsh-Tit in South China. It has also been procured from Hakodadi, Northern Japan.

66. MECISTURA CAUDATA, L.

Mr. Gould remarks that Japanese specimens of the Long-tailed Tit closely resemble British specimens, which offer variation from those procured in continental Europe; while von Schrenck found

those from the Amoorland so similar to European birds that he has set them down as identical. I have no specimens with me, but I observed the form common about the plantations at Shanghai in July 1857. I have never met them further south in China. Captain Blakiston met them at Shanghai in January; hence we may infer that in that neighbourhood at least they are a resident species, or found both winter and summer.

67. Suthora webbiana, G. R. Gray, P. Z. S. 1852, p. 70.

First procured by Mr. Webb near Shanghai. Captain Blakiston met with it in large companies at Shanghai in January. He says they hang about the twigs like Tits. I have never come across the bird.

ALAUDIDÆ.

68. MELANOCORYPHA MONGOLICA.

Alauda mongolica, Pall.

Frequents the Mongolian desert near Pekin, and is kept as a cagebird throughout China (see The Ibis, 1861, p. 333).

69. Calandrella pispoletta, Pall.

Alauda pispoletta, Pall.

Cultivated fields of Talien Bay, North China (see The Ibis, 1861, p. 255). These have more conical bills and longer tails than the European C. brachydactyla, and are doubtless referable to Pallas's species from Siberia.

70. ALAUDA ARVENSIS, L.

A. pekinensis, Swinhoe, P. Z. S. 1863, p. 89.

A. japonica, Swinhoe, Ibis, 1861, p. 333; 1863, p. 94.

A. arvensis, von Schrenck, Amurland, &c., i. p. 273?.

The Skylark is abundant about Peking, and ranges into Amoorland, whence von Schrenck procured specimens. I have, since describing it as peculiar, seen specimens, shot in England, in Mr. Tristram's collection identical with my skins from Peking.

71. Alauda cantarella, Bp.

A. intermedia, Swinhoe, P. Z. S. 1863, p. 89.

This is the Lark that abounds in the valley of the Yangtsze and Shanghai. It is intermediate between the above and the following. This bird was first procured by Prince Bonaparte at Florence. Mr. Tristram has one, shot by himself in Geneva, which is identical in every way with the Shanghai bird. It is difficult to believe that this form extends right across the vast continent, maintaining its distinctness from A. arvensis throughout; but it seems rather that the operation of similar causes in the extreme west and east has produced the same form.

72. ALAUDA CŒLIVOX, Swinhoe, Zoologist, 1860.

This is a small Lark common from Canton to Foochow, and in Formosa. My specimens from the latter place are more largely spotted on the back, and the streaks on the breast are much broader and numerous, but they are otherwise so similar that they can only be regarded as a race.

73. Galerida leantungensis.

Alauda leantungensis, Swinhoe, Ibis, 1861, p. 256.

Common about the hills of cultivated valleys of Talien Bay, North Chiua. A species of crested Lark is noticed by Pallas as Alauda galerita from Dauria.

74. OTOCORYS ALPESTRIS, L.

O. penicillata, Gould.

O. scriba, Bp.

O. albigula, Brandt.

A specimen was procured by Mr. Fleming at Tientsin (see The Ibis, 1863, p. 95). Von Schrenck notes a bird of this genus as the O. alpestris, L., from Amoorland. I have compared mine, in company with Mr. Tristram, with a specimen of O. alpestris of Europe, and we can find no difference. All the species of this genus appear to get yellow faces in the breeding-season.

75. Corydalla richardi, Vieill.

C. sinensis, Bp.

Anthus thermophilus, Hodgs., of my previous lists.

C. infuscata, Blyth.

I have a very large number of this species, shot at Amoy and elsewhere in China, Siam, and India. It is in South China a winter bird, but a few remain about the hills to breed. I found a few on the Foochow hills in June; these were smaller, with larger bills and legs, and darker and more distinctly marked plumage. I sent one to Mr. Blyth, who, under the impression that it came from the Philippines, christened it under the new name C. infuscata. But between this and the ordinary winter race I have every gradation of form and plumage. I also procured in spring at Amoy a few specimens of a somewhat smaller Pipit, richly washed with ochreous; this is Bonaparte's species C. sinensis, and, if correctly identified by Mr. G. R. Gray, Anthus thermophilus, Hodgs. But here again in my large series every step both in form and colour occurs between it and the larger pale race. It is easy to conjecture how these different climatic races of the same bird should turn up at one spot. For the island of Amoy by its position affords a resting-place to vast numbers of birds bound on widely different migrations; and the different groups of the Richard's Pipit, influenced in their forms and tints by the greater or lesser heat of their birth-places and summer resorts, and doubtless by other local causes, in passing to their winter quarters rest for a few days on our island. The large pale variety stays the cold season with us; the rich-tinted variety arrives early, passes away, and returns late, thence showing that it has a long way to travel southwards. The intermediate forms are less regular in their movements. As the nesting-area is found to be more fixed than their winter haunts, the same birds returning to breed year after year to the same spot, it is not improbable that the extreme forms of these races would be found to inhabit in summer areas widely divided, the intermediate gaps being filled up with forms intermediate and approximating most nearly to those to which they were nearest, until amalgamation would ensue.

76. Anthus (Agrodroma) gustavi, Swinhoe, P. Z. S. 1863, p. 90.

Touches at Amoy during the first fortnight of May, bound from the south into the interior of Central China.

77. Anthus Blakistoni, Swinhoe, P. Z. S. 1863, p. 90.

Allied to A. obscurus, Gmel. Procured by Captain Blakiston on the Yangtsze. A species referred to A. aquaticus is noticed by von Schrenck from Kamtschatka; and the same is also given by Schlegel from Japan. These may be identical with our species.

78. Anthus cervinus, Pall.

A winter bird in South China and Formosa, which passes the summer in Kamtschatka and the northern regions. Von Schrenck does not notice it in Amoorland. Flocks pass over Amoy as late as the first week in May; these are probably arrivals from the Indian Archipelago, whence specimens in winter plumage have been received. Before leaving us the bird undergoes an entire moult, when the eyebrows, throat, and breast show a pale vinaceous mixed with more or less ochreous, but unspotted. As the nuptial season comes on, the silvery tinge intensifies into a uniform dusty vinaceous, which encroaches further on the lower parts. I have a fine series showing every gradation between the pale-spotted winter and the fine nuptial dress.

79. Anthus Japonicus, Schleg.

This is said to occur in North China and the Amoor, but I have never procured any specimens of it. I have a strong suspicion that it is only the winter dress of A. cervinus.

80. Anthus agilis, Sykes.

This Tree-Pipit stays the winter in the south of China, and summers in the north, Amoorland, and Japan. The birds from the two last have generally been noted by writers as A. arboreus; and Bonaparte, in his 'Conspectus,' remarks on the Japanese form as "vix distinctus." Our bird is the same as the Indian A. agilis, and can scarcely be regarded as more than a race of the European A. arboreus.

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81. BUDYTES FLAVA, L.

B. cinereocapilla, Savi.

Our Amoy and South-China bird moults in summer into the true European B. flava, with grey head and cheeks, white eyebrow and Those received from Tientsin (North China) in nuptial dress have the entire head grey, and are almost undistinguishable from B. cinereocapilla. B. cinereocapilla was procured in October at Canton by Captain Blakiston. The Formosan variety retains the head green, with a yellow eye-streak, as the B. rayi of Great Britain, but differs in having dark olive cheeks. According to you Schrenck, in Amoorland the true B. flava occurs, and not the grey-headed B. cinereocapilla. In the Malayan Archipelago, I am told, the green-headed variety occurs, but with dark, almost black cheeks; and I suspect that the true British form, with yellow cheek-spot, will turn up at Japan, at which most of the European birds that extend to East Asia undergo a similar change in plumage to what takes place in British forms as compared with those of Europe. I would draw attention to the fact that the Japanese climate is affected by the Pacific Gulf-stream in a manner corresponding to the influence exercised over the British Islands by Maury's "River in the Ocean;" and doubtless the similarity of climate so caused is at the root of this similarity of variation.

82. Motacilla (Pallenura) boarula, L.

M. (Calobates) sulphurea, Bechst.

M. melanope, Pall.

Found throughout China and Formosa, the Amoor, and Japan. Is more a vagatory than a migratory species, and is found at all seasons in the south of China.

83. MOTACILLA LUZONIENSIS, Scop.

M. alba, var. paradoxa, von Schrenck.

M. leucopsis, Gould, P. Z. S. 1837, p. 78.

M. alboides, Hodgs. As. Res. xix. p. 190.

This white-faced Pied Wagtail is a common species throughout China and Formosa, extending into Amoorland. It is also found throughout India and its archipelago, as far as the Philippines. The young are yellowish olive-grey on the upper parts and breast, and have the white of the body more or less washed with ochreous. The male in summer plumage has the occiput and upper parts glossy black, the black of the breast extending nearly to the chin. In winter large flocks of this species visit South China from the north, but a fair number spend the entire year with us. Cognate to M. alba, but smaller, and with much whiter wings.

- 84. MOTACILLA LUGUBRIS, Temm.
- 85. MOTACILLA JAPONICA, Swinhoe.

86. MOTACILLA OCULARIS, Swinhoe.

Under the term M. lugens seu lugubris there has been a confusion of the races of the Pied Wagtails with black eye-streaks, which I have been at some pains to clear up. The difficulty began with Temminck, who, in his 'Manuel d'Ornithologie,' p. 175, described Pallas's Russian species from Japanese examples. He there gives the summer plumage as having the forehead white. At a later date Professor Schlegel refused to acknowledge the existence of Pallas's species as a European bird. Pallas, however, procured his typical specimens, as he tells us, from the shores of the Black Sea; and it has since been brought by officers from the Crimea, and by Mr. Tristram from Egypt. One of Mr. Tristram's two specimens (both of which I have carefully examined) has been figured in Mr. Bree's work on the Birds of Europe. I have no hesitation, therefore, in applying Pallas's name to the race or species found in Western Asia adjoining Europe. Middendorff (Sib. Reis.) applies Pallas's name to the Wagtail of Amoorland, which, from his description, is identical with the bird found throughout China, of which I possess numerous examples in all plumages from Amoy, and one adult summer male from Tientsin. This permanently grey-backed race I have named M. ocularis. In Japan a race occurs similar to the Chinese bird, in having the broad white forehead, but resembling the true M. lugubris in its summer black back. The following diagnosis will, I think, serve to distinguish the three races or species.

(1.) MOTACILLA LUGUBRIS, Temm.

. M. albeola, var. lugens, Pall.

From two specimenss hot by Mr. Tristram, 2nd February 1860, in Egypt. The pectoral band incomplete, showing the birds to be in winter plumage. Forehead black; upper parts blackish brown, with no indications of bluish grey; the primaries are white for only one-third at their bases, and the lateral tail-feather is entirely white.

Hab. Shores of Black Sea; Odessa; Turkey; Egypt (in winter).

(2.) MOTACILLA JAPONICA, Swinhoe.

M. lugubris seu lugens, Temm. & Schleg. Faun. Jap.

The adult summer plumage of this race has been correctly figured in the 'Fauna Japonica.' The forehead is always white; greater part of primaries pure white, but the white lateral tail-feathers with a black inner edge. In winter its back becomes smoke-grey, but always more or less patched with black, with a black shoulder.

Hab. Japan; straggles to the China coast in winter.

(3.) MOTACILLA OCULARIS, Swinhoe.

M. alba, var. lugens, von Schrenck & Midd.

M. albeola, var. kamschatica, Pall.

Back, scapulars, and shoulder-patch perennially light French grey; quills more or less broadly edged with white, never so entirely white as in foregoing; lateral white tail-feathers broadly edged interiorly with black. In summer the breast blackens to the bill,

leaving however the cheek and side of neck white as before; the

plumage remains otherwise the same.

Hab. Eastern Siberia; China; Formosa; through Amoorland to Kamtschatka. Some stay all the year in South China and Formosa.

From the appearance of Mr. Tristram's specimens, it strikes me that the true M. lugubris in summer has the entire head and neck black, leaving only the white eyebrow. If this be the case, it would be more nearly affine to M. maderaspatana, Briss., of Hindostan, from which, however, it differs in its smaller size and in the different distribution of white on its wings. I am strongly of opinion that its affinities are, strictly speaking, rather with this South Asiatic form, and not with the East Asiatic species, both of which have broad white foreheads, and in full summer plumage the cheeks and sides of neck white. In winter our two Eastern species can always be distinguished from M. alba and cognate races by the black eye-line. In that season M. lugubris and M. maderaspatana approach our birds by retaining the black cye-line, but it is in them much broader, and their backs vary from a pale to a dusky brown, and have none of the blue-grey tint that is to a great extent acquired even by M. Bree is certainly wrong in the blue coloration of the back in his plate, for neither of Mr. Tristram's birds shows any trace of it. The rarity of the true M. lugubris in collections has doubtless led to all the confusion that exists; but whether we regard them as races or good species, it is worth while, for the sake of scientific accuracy, that these variations should be correctly identified and localized.

87. NEMORICOLA INDICA, Gmel.

Noticed by me near Pekin (Ibis, 1861, p. 333), and afterwards brought home from same locality by Mr. Fleming (Ibis, 1863, p. 94).

CINCLIDÆ.

88. HENICURUS LESCHENAULTII.

Turdus leschenaultii, Vieill.

Motacilla speciosa, Horsf.; Ibis, 1861, p. 265.

Enicurus coronatus, Temm. Pl. Col. 113.

Never observed by me in China except on the hills round Foochow, where I have procured it both in winter and summer. My specimens from that locality correspond entirely with Javan skins.

89. Henicurus schistaceus, Hodgs. As. Res. xix. p. 190; Ibis, 1861, p. 409.

The only Chinese specimen I ever saw of this bird was procured in February 1861 by M. De Grijs, Netherlands Consul at Amoy, in the tea-hills some 150 miles inland of Amoy. The skin was, I believe, forwarded to the Leyden Museum. It was kindly lent to me, and I took down the following note from it:—"Bill black; legs and claws pale flesh-colour; upper parts slate-colour; a white streak crosses the forehead and runs over the upper half of the eyelid; nostrils, throat, and cheeks black; under parts pure white; smokegrey on the flanks, and black under the shoulder; wings and tail

deep blackish brown; shoulder-edge, tips of greater coverts, spot on base of primaries, and tips of secondaries white; rump, two outer tail-feathers, and tips of the rest white." M. De Grijs told me that he saw these birds on the margins of pools on the hills, and that they frequently uttered twittering notes not unlike those of the Sandpiper (Tringoides hypoleucus), but louder. I compared the Chinese skin at the time with one from Burmah, received from Mr. Blyth, and could not find any noticeable difference between them.

90. CINCLUS PALLASII, Temm.

This is noted from Amoorland, Japan, and Formosa. I have therefore no hesitation in including it in my Chinese list, as it is sure to occur in the interior mountain-ranges.

91. Рітта мумрна, Schleg. Faun. Jap. Supp. pl. A.; Ibis, 1861, p. 412.

I never procured but one specimen of this bird, and that was in June 1861 at Amoy; so that at present I cannot regard it as more than a straggler, probably from the extreme south of China. My specimen runs uncommonly close to *P. cyanoptera*, var. from Siam, which has the black crown-line separate from the nuchal bar. Mine has the black crown-line only indicated by a brown patch, and the white on its wings more extended. At the best I presume it can only be considered a race of the varying species *P. cyanoptera*. The Malacca race has the black crown-line united to the nuchal bar.

92. Myiophonus cæruleus, Scop.; Ibis, 1861, p. 36.

Common on all the retired rocky hills from Canton to Ningpo, where it is ever a constant resident. The males are a good deal larger than the females. It finds its nearest ally in the *M. temminckii*, Vigors, of Assam and Arakan, which is always distinguishable from our black-billed bird by its partly yellow bill. The group is represented in Formosa by a species of the subdivisional form *Arrenga*, hitherto only known from Java and the Neilgherries.

PYCNONOTIDÆ.

93. Hypsipetes holth, Swinhoe, Ibis, 1861, p. 266.

Very closely allied to *H. maclellandi*, Horsf. First procured at the Foochow hills. Has since been obtained on the Ningyang teahills near Amoy(see The Ibis, 1861, p. 409). Resident on the hills.

94. Ixos jocosus, L.

Gracula cristata, Scop. Sitta chinensis, Osbeck.

In China not found north of Canton; about that city it is specially common (see The Ibis, 1861, p. 39). Our specimens appear identical with those from Calcutta. The young birds have a brown instead of a black crest, the lore and under the eye only being black, and the upper plumage generally is much lighter and mixed with

light yellowish red. The vent is brownish buff, with only a tinge of crimson, and the crimson eye-spot is entirely wanting.

95. Ixos chrysorrhoides, Lafresn.; Ibis, 1861, p. 39.

Crown of head black; under the eye, lore, and chin blackish brown; vent crimson. This is a common resident species in the south of China, from Canton to Foochow.

96. Ixos sinensis, Gm.

I. occipitalis, Temm.

A very common resident species from Canton to Foochow, and also in Formosa. The young of this species have the head a uniform colour with the back, which is light brown instead of grey; the rest of the colours are much paler. Among my series from Amoy I have one very curious variety, in which the white of the occiput and throat is of a fine clear smoke-grey. My specimens differ from one another chiefly in the development of the white occipital patch; some have it very large, and occupying a good portion of the head, while in others it gets encroached upon by the black, until in some specimens it almost entirely disappears. There is also a great variation in size, and length of wing and tail; but in the form and length of bill the difference is not so appreciable as I have found it in many species of birds.

97. SPIZIXOS SEMITORQUES, Swinhoe, Ibis, 1861, p. 266.

A resident species in the high plateau near Foochow. I have also procured it from the mountain-rauges of Formosa. The male and female are of similar form and colouring.

TIMALIIDÆ.

98. LEUCODIOPTRON SINENSE, L.

L. canorum, L., of my previous lists; Ibis, 1861, p. 38.

The Chinese Song-thrush, or Hwa-mei. A common bush-bird about all the hills from Canton to Foochow. Is replaced in Formosa by a closely allied form wanting the white eyebrow. Is frequently kept in confinement by the Chinese for its fine song and pugnacious habits.

99. GARRULAX PERSPICILLATUS, Gmel.; Ibis, 1861, p. 38. A resident bird from Canton to Foochow.

100. Pomatorhinus stribulus, Swinhoe, Ibis, 1861, p. 265. Only as yet procured from the hills near Foochow.

TURDIDÆ.

101. OREOCINCLA AUREA, Hollandre.

Turdus whitei, auct. Brit.

Two seen at Amoy in March 1859; a male procured. Feathers

of a specimen were found in a wood near Pekin (see The Ibis, 1861, p. 333). I extract my note on the bird procured:—Length 11½ in.; wing $5\frac{2}{10}$; tail $4\frac{1}{4}$; bill 1, to gape $1\frac{4}{5}$; tarsi $1\frac{4}{10}$; mid toe $1\frac{3}{10}$; hind toe 1; side toes equal. The second primary is $\frac{1}{4}$ inch longer than the fifth, whereas Bonaparte, in his 'Conspectus Avium,' says that in the true O. aurea they are equal. Bill pale brown; legs and claws pale brownish; irides deep hazel; feathers of the rump spinous, as in the Cuckoos, Geocichlæ, Campephagæ, and Pericrocoti; testes dark purple; stomach somewhat oval, compressed, rather muscular, and about $\frac{9}{10}$ in widest diameter; intestine 17 inches long, from $\frac{2}{10}$ to $\frac{3}{10}$ wide; cæca $\frac{1}{4}$ long, one slightly higher than the other, and placed $1\frac{1}{2}$ inch distant from anus. Whether this be a distinct race from the Siberian and rare British visitant I am not prepared to say; I have but one specimen of our bird. It was an extremely rare visitant to Amoy, and, as far I could ascertain, only in spring, when the banyan-berries were ripe. I presume it came from the wooded mountain-ranges of the interior. Formosa yields a race which is larger and paler than the Amoy bird, with sensibly longer wings and tail. For this I have proposed the specific name O. hancii (see The Ibis, 1863, p. 275). The Japanese race, which is declared to have been shot in Britain, as well as the true O. aurea, is by some considered a good species, and has been named O. heinei.

102. Turdus sibiricus, Gm.

T. leucocillus, Pall.

A male in complete plumage shot at Amoy, 19th April, 1861, was of a smoky black, with a pure white eyebrow, white on the axillaries, a white bar across under wing, and drops of white on the medial belly-line and crissum. Bill black; inside of mouth orangeochre; edge of rictus pale dusky yellow; legs and claws ochre, with saffron base to tarsi and soles of toes.

This is said to be a common bird in Siberia. In Japan it probably breeds, as Captain Blakiston brought young birds from Hakodadi. In the south of China it is rare, occurring occasionally during its migrations. It is said to have been procured as far south as Java, but is not noticed by von Schrenck from Amoorland. The females are brown and Thrush-like; and the young plumage closely assimilates the species to Oreocincla, which group it also approaches in the somewhat spinous rigidity of the feathers of its rump, and in the white bar across its wing. In addition to these two last characters, in the smoke-grey hue of its mature plumage it appears to show a decided tendency towards the Campephagine group Volvocivora, which in the immature state has the white bar across the wing, allying it to the usually red-tinted Pericrocoti, one of which (the P. cinereus, Lafresn.) has, like it, a sober grey plumage and a constant white under-wing bar. The Campephagæ, as most naturalists are aware, also enjoy the peculiarity of baving spinous rumpfeathers, which prick the hand when passed upwards over the rump. All true Geocichlæ have this curious spinous character, as also the white bar across the under wing.

103. Turdus cardis, Temm. Pl. Col. 518.

This Thrush hails from Japan. It is noted from the Amoor by von Schrenck. It is found in flocks every winter on the south coast of China, as far as Canton. I do not know whether the young males on leaving the nest resemble the female; but when they reach Amoy, they differ in being duskier, with larger spots, and with scarcely any rufous except on the axillaries. The plumage continues to change gradually, the olive-green upper parts at first becoming smoke-grey, and the spots on the breast disappearing, until the entire bird is black, except on the belly and vent, which remain white. I have a series of five males showing the gradual transition. Like all Thrushes, T. cardis varies much in size. The female retains her immature or Turdine dress. I have four females of different ages. The older birds are more richly coloured, with larger spots, and more rufous on the under parts.

104. Turdus Hortulorum, Sclater, Ibis, 1863, p. 196.

Found as a resident species in South China, about Canton and Macao. Mr. Blyth once procured a similar bird at Calcutta (which he named Geocichla dissimilis), but I have reason to believe it is not the same as the South-China species; neither surely can it be T. cardis, with which Jerdon, in his 'Birds of India,' has confounded it. Mr. Sclater has drawn the character of the species from the oldest male I possessed, but it is not quite matured. It strikes me that the adult will have the whole throat and breast cinereous, instead of only a pectoral band of that colour.

105. Turdus Chrysolaus, Temm. Pl. Col. 537.

Summers in the Amoor and Japan. Visits the south of China during winter in flocks, extending its migrations easterly to Formosa and Manilla.

106. Turdus daulias, Temm. Pl. Col. 515.

T. pallidus, Gm. ex Lath.

Common during winter in South China and Formosa. Spends the summer in Amoorland and Japan.

107. Turdus pallens, Pall.

T. obscurus, Gmel.

Found in Japan and the Amoorland; migrates southwards during the winter.

108. Turdus fuscatus, Pall.

Found during winter in South China; noted from Amoorland.

109. Turdus naumanni, Temm.; Ibis, 1862, p. 319, pl. x.

Found in the Amoorland; and specimens have been received from China as far down as Shanghai. On the more southern coast it is occasionally, though rarely, met with during winter.

110. Turdus ruficollis, Pall.

This Fieldfare I found in flocks about Pekin in the commencement of the cold season (see The Ibis, 1861, p. 332, and 1863, p. 93). I have never met with it in Southern China, and it is not noted from either Japan or the Amoor.

111. Turdus (Merula) mandarinus, Bp. Consp. Av. p. 275.

Both sexes of this Blackbird have lemon-coloured bills, that of the female being tipped with black. The female is usually browner than the male; but the male himself is a dull brownish black, and sometimes the two are uncommonly hard to distinguish, especially before the immature bill has changed to yellow. This is a common resident species throughout Southern China, from Canton to Shanghai. I did not meet with it in Pekin, nor has it been noted from the Amoor. It builds a nest like that of the common Blackbird, but its eggs more resemble those of the Missel Thrush (T. viscivorus).

112. Petrocincla manilensis, Bodd.

P. pandoo, Sykes. P. affinis, Blyth.

The Rock-Thrush of Formosa and of all the exposed islands has, as far as I have ascertained, invariably a red belly in the adult male, and answers to the P. manilensis of authors. It is found on the Chinese coast, from Canton to Tientsin. But on the Chinese main, some distance inland, the bird is blue, and undistinguishable from P. pandoo, Sykes. Nearer the coast we have the intermediate race, P. affinis of Blyth, with partly red under parts and somewhat more graduated tail. From Amoy I have procured all three forms, and every intermediate gradation. The females of all three are, to my eyes, identical. Now the only way I can account for these three so-called species inhabiting the same locality is, that, being near the sea, the island constantly receives fresh individuals from the channel islands, which interbreeding with the blue race, P. pandoo, produce the third, P. affinis, and the intermediate forms. In song, habits, and nesting the two extreme forms observed at Amoy and in Formosa are not to be separated; and their females are so alike that it strikes me that, to solve the difficulty, we must believe the two of one common parentage, sequestrated by circumstances, and, owing to climatal or other causes, to have undergone an amount of change in their internal economy sufficient to alter the colour of their under plumage, but that this change has not so far alienated the two races as to prevent them interbreeding freely, and producing fertile offspring, in places where they are thrown together. In my large series the skins vary a good deal in size, proportions of bill, wings, tail, and legs. P. pandoo is generally separated from the P. cyanea, but I do not see on what sufficient grounds. Mr. Jerdon, in his 'Birds of India,' has rightly enough connected them. It is easy to account for P. affinis occurring in Burmah; for we know that the red-bellied P.

manilensis occurs on the coasts of Java and Siam, and, I suspect, would be found on the Andamans and on the coast of Burmah itself, where they would meet with the blue race from the interior, and cross, as I know them to do in China; P. affinis would then be produced. In Amoy the red-bellied race, the blue race, and the affinis are found in about the proportion 4:2:1. This fact of red-bellied and pale-bellied birds crossing and producing apparently fertile hybrids appears to be repeated in the small Cuckoos Polyphasia (see Jerdon, Birds of India, i. p. 335).

113. ORŒCETES GULARIS, Swinhoe, Ibis, 1863, p. 93, pl. iii., and 1861, p. 332.

This forest-thrnsh has its nearest ally in O. cinclorhynchus, Vigors. It has as yet only been procured from the neighbourhood of Pekin.

114. ORIOLUS CHINENSIS, L.

O. cochinchinensis, Briss.

O. indicus, Briss.

This is a summer visitant to the whole of China, and ranges as far north as the Amoor, and eastwards to Formosa. Our birds wend southwards in the winter. I have a specimen received from Siam, kindly sent me by Sir R. Schomburgk, and others from Malacca and Burmah in different stages of plumage, all identical with our summer visitant. These Malayan countries are therefore doubtless the winter resort of our bird; and I think it will be found that few, if any, of this species spend the warm season in those regions, their place being there supplied by an allied race, the O. tenuirostris, which we do not get. The male Oriole carries a partially immature plumage throughout the second year, the females to the third or fourth year; but in fully adult dress the sexes are not to be distinguished. It is, however, much rarer to see mature females than males. This similarity of adult sexes holds good in the allied Psaropholus group, and, as I am told by reliable observers, in all the Orioles.

CAMPEPHAGIDÆ.

115. Volvocivora melaschistos, Hodgs.

Campephaga —— ?, Ibis, 1861, p. 42.

C. avensis, Blyth.

C. silens, Tickell.

C. culminatus, A. Hay?

I have five of this species from China, two from Burmah, and one from Calcutta, of which the mature birds are identical in all respects, except in the size and proportions of the bill. If we regard this as a character in this bird, we should have to separate the adult specimen I procured at Canton from an adult from Amoy, the former having a very much shorter bill than the latter. But on comparison of specimens, the bill varies in each individual, and is therefore in-

sufficient as a character. V. fimbriata, as Jerdon remarks, does appear smaller; but all skins that I have seen from the Malacca collectors are shrunk in size, owing to their mode of preservation. Like the Grancalus macei, which I fully expect to meet with some day in China, this bird has a wide range over the greater part of tropical Asia. In South China, from Canton to Amov, it is only a summer visitant, spending the season of nidification with us, and returning southwards again in the autumn. I have a nice series of the different stages of plumage it undergoes. I have a bird of the year, collected by Captain Blakiston in Canton, which is of a blackish grey, each feather carrying a bar of black and a broad cream tip; the quills and tail are greyish brown glossed with green, the former edged and tipped with cream-colour, and the latter broadly tipped with white; the under tail-coverts are cream-buff, irregularly barred with light black; many of the quill-feathers are edged inwardly with white, forming an indistinct under-wing bar. In this stage the bird appears to form a link between the young of Oreocincla and Dicrurus. As it advances to maturity, the spots disappear, the plumage becomes light smoky grey, with a wash of rusty buff and faint bars on many of the under feathers; the white on the under wing increases and forms a distinct bar. In this stage it more resembles the second plumage of Pericrocotus cinereus, which in the young state also has a mottled plumage, but carries a white under-wing bar through all dresses. In the adult bird the white bar disappears entirely; the wings and tail become a glossy green-black, with broad white tips to all but the two central rectrices; and the rest of the plumage deepens into a bluish smoke-grey, much paler on the under tail-coverts. The female is paler and less glossy than the male, but in other respects similar. The adult bird, when viewed seated on the bough of a tree, launching forth on wing after an insect and returning to its post, brings forcibly to mind the habits of the Dicruri. But at other times it may be seen hanging about the ends of branches, searching the leaves, and taking short flits into the air. On these latter occasions the younger birds, especially with their white wingbars, might be easily mistaken for large grey Pericrocoti with stunted tails.

116. Pericrocotus cinereus, Lafr.; Swinh. Ibis, 1861, p. 42.

Found in summer throughout China as far north as the Amoor. Procured originally from the Philippines, to which it probably wanders in the winter. In autumn and spring, flocks are frequently met with about Canton, Amoy, and Formosa. Its plumage is black, grey, and white, with an occasional tinge of saffron on the flanks and under-wing bar. Curiously enough, this yellow tinge is brighter on the younger birds and females than on the males. The male is distinguished from the female by its broad white forehead, by its black occiput and hindneck, and by the rest of its plumage being deeper and glossier. The youngest bird I have is from Pekin, in which the under plumage is faintly barred, and the tertiaries barred with black and tipped with white. In this the under wing-coverts

and upper wing-spot are primrose-yellow. At first glauce this might be taken for a Pied Wagtail. The spinous rigidity of its rump-feathers is stronger in this than in any other species with which I am acquainted.

117. Pericrocotus cantonensis, Swinhoe, Ibis, 1861, p. 42.

This species, forming so happy a link between the preceding grey and some of the crocus-tinted forms of this group, I have as yet only seen from Canton, where it was pretty common. The tendency of the female to develope the yellow tints is in this much more strongly shown than in the last, so much so that Dr. Sclater declined to accept my identification of the sexes. But apart from any special examination of the sexual organs, the skins carry in their plumage their sexual stamp; for, analogous to what obtains in the foregoing species, the male of this has a white forehead and a dark head. I have no young specimen; but, judging from the last, I should say that the young would be as strongly tinged with saffron as the female.

3. Bill and legs black; irides deep brown; forehead, throat, sides of nape, and vent white; the rest of the under parts dingy; head, back, and scapulars deep brown, with a wash of grey, blacker on the former; rump and upper tail-coverts light yellowish brown; wings and tail rich hair-brown, the former edged paler, the latter with the stems brownish white, and more or less white on all except the two central rectrices; white of under wing and wing-bar with a wash of pale saffron, the yellow being rather bright on some of the

axillaries; wing-spot dingy yellow.

Q. Rump more of a colour with the back than in the male; upper parts lighter and browner; wing-spot bright yellow; quills edged with yellow; the light part of rectrices rather bright yellow; axillaries and wing-bar fine primrose-yellow; forehead narrow, dingy white; in other respects like the male.

Length $7\frac{2}{8}$; wing $3\frac{1}{2}$; expanse $9\frac{2}{8}$; tail $3\frac{6}{8}$.

118. Pericrocotus sordidus, n. sp.

I have a bird, procured at Amoy on the 29th September, 1859, which differs from the preceding two in many respects, but yet has such intermediate characters that I have at one time felt inclined to consider it a variety of the one, and at other times of the other. After due deliberation, I have thought it best to separate it as a distinct form. My only specimen is a male, not quite mature. Upper parts greyish brown, paler on the forehead, and darker bluegrey on the head and hind neck; wings and tail hair-brown; greater wing-coverts tipped with white, but no wing-spot outwardly visible; two middle rectrices unicolorous, the rest more or less white; throat and vent white, the former tinged with brown; a black spot in front of the eye; under plumage greyish brown; a dingy white bar runs across the under wing, with a faint tinge of primrose-yellow. Length $7\frac{1}{2}$ in.; wing $3\frac{1}{2}$; tail $3\frac{7}{10}$. This may turn out to be only a more northern race of the P. cantonensis; but, at all events, it is extremely interesting as drawing the species closer still to P. cine-

reus. All these species have similar call-notes, and feed chiefly on tree-bugs (Cimicidæ) and their eggs, in search of which they creep and hang about among the leaves and branches of large trees, ranging the country in flocks.

119. Pericrocotus speciosus, Lath.

Phænicornis princeps, Gould.

I have only one of this species, purchased alive from a boy who was playing with it at Foochow. I have never met with it in my rambles. Its plumage is of such a dazzling red that it quite hurts the eyes to look at it, affording a strong contrast to the sober hues of the three above.

DICRURIDE.

120. DICRURUS LEUCOPHÆUS, Vieill.

General plumage light bluish grey; the eye standing in a conspicuous white cheek-patch; nasal feathers, edge of outer rectrices, shafts of quills and tail, and greater part of most of primaries black; bill and legs black; irides carmine-red. This species is, strangely enough, not mentioned in Jerdon's 'Birds of India.' It has been received from the Malayan peninsula, where it is probably only a winter visitant, and is quite a distinct bird from D. cineraceus, Horsf., which is a Javan species. In China it is common in summer about the Vale of Foochow, and probably extends into the interior of Central China. My specimens agree precisely with a Malacca skin in Mr. Gould's collection. Captain Blakiston procured it at Canton in September, on its southward migration, and I have procured it at Amoy on its spring return, but its summer habitat does not appear to extend south of the latitude of Foochow. It will probably be found during that season to range as far north as Ningpo, though at Shanghai it is not known.

121. DICRURUS MACROCERCUS, Vieillot.

Adult deep black, glossed with blue and green. Young birds dark brown, without the gloss, and mottled on the axillaries and lower parts with white. A summer visitant throughout China right up into Amoorland. Exceedingly abundant in Formosa. I have a specimen from Hankow, Central China. Appears to be the most widely spread *Dicrurus*.

A third species of *Dicrurus* visited our garden at Amoy one spring. It was much smaller than either of the foregoing, and saug most sweetly. It stayed a few days and then disappeared. Though this

was many years ago, I have never seen the form since.

122. Chibia hottentotta, L.

I have a pair shot at Amoy in the spring of 1861, and I have seen another from Tientsin (North China). We must suppose, then, that this species is a summer visitant to China, and at that season sparsely scattered throughout that land. Ours is identical with the Indian bird. The female is dingier than the male, and not so well marked.

Both carry the peculiar long bristles that, springing from the root of the bill, pass over the crown down to the back and shoulders.

123. Lanius schach (Gm.).

L. chinensis, Gray.

This Shrike throws off its young plumage at the first moult, when the male and female are similar in dress. The young is light chestnut-brown on the upper parts, mottled and barred with black; throat white, rest of lower parts pale chestnut, mottled on the breast; wings deep brown, the coverts being tipped and the tertiaries edged and tipped with chestnut-red. The black eve-mark is strongly marked, but lighter than in the adult. Of the variability of this species, and the tendency it frequently shows towards allied forms, I have before remarked in my paper on the birds of Formosa, in The Ibis, 1863, p. 270. The small race from India and Borneo is distinguished as L. erythronotus, Vigors; and L. nigriceps and L. tephronotus, both from India, are forms closely akin to ours.

124. Lanius Phenicurus, Pall.

L. lucionensis, L.

L. superciliosus, L.

L. cristatus, L.

The first of these is found in China as a summer visitant, extending to Talien (North China) and perhaps to the Amoor. In autumn large numbers pass southwards down the coast, some making for the Philippines, touching on their way at south-west Formosa. How far south of China these migrants go we do not know; but at Malacca we have another race, distinguished by its bright rufous instead of ashy head and back. In Java, the Andamans, and Ceylon, our bird again makes its appearance, but whether as a resident or a migrant history telleth not. In Hindostan the L. cristatus occurs in winter chiefly, being of a browner plumage, with indistinct eyemark; this will probably be the typical L. phænicurus of Pallas, finding its summer resort in Siberia. Now, can we suppose that the large numbers of these small Butchers that leave China find their way down to the southern islands, passing over the habitat of an allied race, and after spending a few months speed back the same long distance to their summer quarters? Pondering over the laws of migration, I was much puzzled in procuring at Amoy a specimen of L. superciliosus (the Malacca race), and shortly after a pair of the Indian form. But when I collected a large series I found the gradation from one to the other most complete. Is it possible that in their migrations they occasionally induce others of allied forms to return with them and interbreed? I cannot help thinking it far more probable that the browner Siberian bird is the typical race, from which the others have sprung, and that the rufous colouring of the ashy L. lucionensis, making it in some cases almost identical with Indian birds, shows merely a natural tendency to return to the typical plumage. The characters of both these forms strongly combined serve to produce the Malacca race. But, at any rate, some other agent than that of climatal influence must have been at hand to work the change, in alienating forms from their pristine type and in assimilating the aliens situated under apparently such different circumstances.

I have a fourth well-marked variety, with the ashy head, but with no white on the forehead, and scarcely any eyebrow; its back is rufousbrown, like the tail. This may yet turn out to be another race pe-

culiar to some particular area.

On its arrival in spring and autumn at Amoy, this Shrike announces itself very soon by its loud jarring note. It feeds occasionally on insects, but I think more frequently on small birds. It arrives with the majority of the Willow-Wrens, following closely at their heels and preying daily upon them. While feeding it impales its prey on thorns, as do most Shrikes. If a bird, it usually suspends it by the neck, and commences operations on the brains. It sometimes, during its visit, entertains us with a song, which is the most melodious of its kind that I have ever heard.

125. LANIUS BUCEPHALUS, Schleg. Faun. Japon.

I have one female, procured so far south as Amoy. It is found in Japan and North China.

126. Artamus fuscus, Vieill.

Reported by Cassin to have been procured by Commodore Perry's expedition at Macao. I have never met the bird. (See Report, &c., of Perry's Japanese Expedition.)

HIRUNDINIDÆ.

127. HIRUNDO GUTTURALIS, Scop.

H. rustica, var. rufa, von Schrenck.

A summer bird throughout China as far as the Amoor. Also visits in the same season Japan and Formosa. Winters in Siam and Hindostan. Is the eastern representative of *H. rustica*, L.

128. HIRUNDO DAURICA, L.

H. alpestris, Pall.

Locally distributed throughout China as far as Peking. In North China only a summer visitant. In South China vagrant during winter. Represented in Japan and Formosa by larger varieties.

129. CHELIDON LAGOPODA, Pall.

Never procured in China, except at Tientsin. It thence ranges into Amoorland. For comparison of this eastern race with the European C. urbica and with C. blakistoni of Japan see The Ibis, 1863, p. 91.

130. Cotyle Riparia, L.

Procured in North China (Tientsin), where it is a summer visitant. It is noted by von Schrenck from Amoorland.

131. Cotyle sinensis, J. E. Gray.

Distinguished from the foregoing by its much shorter tail. presents the form in South China and Formosa, repairing thither in summer to breed. It visits the plains of Hindostan in winter, and is said to breed there again in that season. Mr. Tristram tells me that he found the C. riparia breeding in Egypt in winter; and as they all disappear from that country in summer, it is not improbable that it is the same bird that visits Europe, and breeds a second time on arrival at its summer quarters.

Muscicapidæ.

132. Hemichelidon sibirica, Gmel.

Muscicapa fuscedula, Pall. H. fuliginosa, Hodgson.

I have only one of this very interesting species procured at Amoy. Ours is rather larger and has longer wings than the Himalayan bird, but I think is the same. It is said to range to the Amoor, and beyond to Kamtschatka. Its axillaries, under wings, and tips to greater wing-coverts are strongly rufescent, and approximate it to the following, from which it may be considered subgenerically to differ in the shape of the wing, though the several members of this group, as I have cnumerated them, connect this in regular gradation with the typical Butalis grisola.

133. Butalis ferruginea, Hodgs.

Butalis rufescens, Jerdon. Hemichelidon rufilata, Swinhoe, Ibis, 1860, p. 57.

This is a summer visitant to South China. It is not very common; but every spring a few make their appearance at Canton and Amoy. It is identical with the Indian bird.

134. Butalis latirostris, Raffles.

Muscicapa pondiceriana (Licht.), Midd. Sib. Reis. M. cinereo-alba, Schleg. Faun. Japon.

Is a winter visitant to South China, from North China, the Amoorland, and Japan. It is identical with the Indian species, which is there a winter visitant, probably from Siberia, whence it is recorded as a summer bird.

135. BUTALIS GRISEISTICTA, Swinhoe, Ibis, 1861, p. 330.

Muscicapa grisola, var. daurica, Pall.

This links the small half-Swallow group of Fly-catchers with the spotted Butalis, and might with propriety be placed in either genus. It is a summer visitant to China, at which season I have found it as far north as Peking.

136. XANTHOPYGIA LEUCOPHRYS, Blyth, Journ. As. Soc. xvi. p. 123.

The male of this may at once be distinguished from that of the following species by its white eyebrow, which, in the other, is bright golden, by its less flammeous tints, and by its smaller size and more slender form. The female is widely different from the female of the other, if my specimen from Tientsin be correctly marked; but I suspect it is an immature male. This bird extends its summer migration as far north as Tientsin. I procured a male once at Amoy. It was originally described from the peninsula of Malacca, where I suspect it hybernates. Its migrations must be performed well inland, or we should see more of it on the coast.

137. XANTHOPYGIA NARCISSINA.

Muscicapa narcissina, Temm. & Schleg. Faun. Japon. (the male).

Muscicapa hylocharis, Temm. & Schleg. Faun. Japon. (the female).

Occurs at Amoy and Canton in large numbers in spring and autumn, bound apparently to Japan, where they are found in summer. The male and female are by mistake distinguished in the 'Fauna Japonica' as two distinct species. I found this to be the case on looking over the plates, and proved my suspicions to be correct by an examination of the birds in the Leyden Museum.

138. TCHITREA PRINCIPALIS.

Muscicapa principalis, Schleg. Faun. Jap.

Passes Canton and Amoy, on its way to and from Japan. Is found during winter in the Malacca peninsula, where it is noted as *T. atricaudata*, A. Hay. Varies a good deal in size and length of wings and tail.

139. TCHITREA INCEI, Gould, Birds of Asia.

Allied to *T. affinis*, from which distinguished by its smaller bill, by its green-black head and neck, and by the purpler tints of its upper parts. Combines to a certain degree the characters of *T. affinis* and *T. paradisi* with those of *T. principalis*. Mr. Whiteley of Woolwich procured several, through Mr. Fleming, from Tientsin, and one in the white plumage. Is a summer visitant to North China, from Shanghai to Tientsin. Mr. Gould's type specimen was from the former locality.

140. MYIAGRA AZUREA, Bodd.

Common in Formosa. A rare winter straggler to Amoy. Occurs in various parts of India and Malayana (see Jerdon's Birds of India). Is said also to occur in the Philippines.

141. EUMYIAS MELANOPS, Vigors.

Stoparola melanops of my Amoy list.

Of the distribution of this bird in China I know nothing. I PROC. ZOOL. Soc.—1863, No. XIX.

never procured but one female, and that was at Amoy, in December 1857.

142. CYANOPTILA CYANOMELÆNA (Temm.), Pl. Col. 470 (the male).

Muscicapa gularis, Temm. Faun. Jap. (the female).

In spring and autumn these birds are very abundant about Canton and Amoy, on their way to and from North China and Japan. I do not think many, if any, stay in the south. I have seen specimens from Tientsin; and von Schrenck notes the female M. gularis from the Amoor. I have one specimen with very short bill; but specimens differ in the size of that organ, and in the tint of the blue on the crown. For a further account of this species, see The Ibis, 1861, p. 41.

143. ERYTHROSTERNA LEUCURA (Gm.).

Muscicapa albicilla, Pallas.

The eastern representative of E. parva, Bechst. It is common in North China, and is found as far north as the Amoor. In winter it migrates southwards, at which season we meet with it in Amoy and Canton. It differs from E. parva in having only a red patch on the throat, which does not extend down the breast. Both E. parva and E. leucura occur, I am told, in Hindostan during winter.

144. ERYTHROSTERNA LUTEOLA.

Muscicapa luteola (Pall.), Midd. Sib. Reis. pl. 17. f. 1-3.

M. mugimaki, Schleg. Faun. Jap.

M. erythaca, Blyth.

Muscicapa hylocharis, Swinhoe, Ibis, 1862, p. 305 (nec Schleg.).

The male of this species is figured in the 'Fauna Japonica' as M. mugimaki, and I myself have long confounded it with the preceding bird. The female, with its Robin-like plumage, and absence of white on the lateral rectrices, is the M. erythaca of Blyth, from Penang. I procured a female at Amoy in November 1861, and unfortunately made the already existing confusion worse by describing it in The Ibis as Muscicapa hylocharis of the 'Fauna Japonica.' Von Schrenck figures a young bird from the Amoor in mottled plumage, with the white base to tail. It is rather curious, then, that our female should have no signs of it. This bird would appear to extend over the north of Eastern Asia and Japan, repairing southwards in winter.

Sylviidæ.

145. IANTIHA CYANURA.

Lusciola cyanura, Faun. Jap.

Ianthia et Nemura rufilata of my former lists.

Male blue on upper parts, white-eyebrowed; white on hinder parts, with orange-coloured sides; distinguished from the Himalayan race, I. rufilata, Hodgson, by the white eyebrow, which in the other is wanting. Female greenish olive on upper parts, olive buff on lower, with orange sides, blue tail-coverts, and blue-washed tail. Summers in North China, the Amoor, and Japan, and visits Amoy and South China in winter.

146. Ruticilla fuliginosa, Vigors.

Inhabits high hill-ranges of South China, and is found in the plains during winter. Is identical with the Himalayan bird. Occurs also in Formosa.

147. RUTICILLA AUROREA, Pall.

Ruticilla leucoptera, Blyth.

Summer visitant to North China, the Amoor, and Japan; found in Amoy and South China in winter. Easily recognized by its conspicuous white wing-spot.

148. PRATINCOLA FERREA, Hodg.

Intermediate between the Chats and the Redstarts. Roams about in parties in South China during winter. Probably retires to the mountains of the interior to breed. Specimens from the Himalayas and Tenasserim are identical with ours.

149. Pratincola Rubicola, var. indica, Blyth.

This is nothing more than an eastern race of *P. rubicola* of Europe, chiefly distinguished by its black, instead of white, axillaries in the adult male. My specimens vary a good deal in size and length of wing. During winter it is abundant in the South of China, but in spring betakes itself north, and in summer is found in North China, the Amoor, and Japan.

150. Cyanecula cærulecula, Pall.

This is the red-spot Bluethroat. I have never seen it in China, except from the neighbourhood of Tientsin, where it would appear to be a rare summer straggler. It is not noticed from the Amoor or Japan.

151. Copsychus saularis, L.

The common resident Magpie-robin of South China up to Foochow. It does not extend so far north as Shanghai. Our bird is identical with the species prevalent in Hindostan.

152. LARVIVORA GRACILIS, Swinhoe, Ibis, 1861, p. 262, et P.Z.S. 1862, p. 316.

Male cyaneous on the upper parts, with black face and cheek, pure white on under parts. Female greenish olive on the upper parts, white on the lower, with buff markings on the face and sides. Young birds like the female, but with the throat and breast buff. Allied to *L. cyanea*, Hodgs., of the Himalayas.

These birds are locally distributed throughout China, from Canton to Pekin. They roam about during winter, but I believe do not

regularly migrate. I found them not uncommon about Canton. have procured them at various seasons at Amov, and have seen them from Tieutsin.

153. LARVIVORA SIBILANS, n. sp.

Larvivora, sp.?, Swinhoe, Ibis, 1861, p. 34.

My only specimen from Macao of this bird is a very wretched one. It may be that of a female, but I have reason to believe it an adult bird; for I watched several, and they all appeared of similar plumage. It is of a sober olive-brown, with the red tail of a Redstart, the feet of Larvivora, and the bill of a Robin. It was not at all uncommon about the copses and thickets near Macao in May, but extremely difficult to get at. I trust I may make the bird's better acquaintance on some future day. I have thought it worth while now to allude to it, as I consider it a good species.

154. Calliope Kamtschatkensis, Gm.

Male with fine crimson throat. Females with throat whitish, and without the white and black that ornaments the face of the male. When passing our coast in spring, the young males are found returning without having acquired the adult tints, usually only a few reddish feathers appearing on the throat; but the change of hue (not moult) goes on very rapidly, and probably would be perfected by the time of their arrival at their northern destination. The young males can be readily distinguished from the females by their much whiter throats and darker lores. These birds touch at Amoy in their northward migrations in April; I would hence infer that they had been a long way south for their winter. Their summer range is all through North China, Mantchuria, as far as Kamtschatka. I found them at Pekin in October; but they were young birds, and might have been late in their southward migrations. They occur abundantly, I am told, during winter in Hindostan. These would be birds from the Siberian region. Our northern migrants would be expected to winter in Siam and the Malayan peninsula, whence, I believe, specimens have been received. In form these birds are intermediate between the Robins and the Reed-warblers.

155. Tribura squameiceps, n. sp.

Allied to Tribura luteiventris, Hodgs., from Nepal. I have only one specimen, procured by Captain Blakiston at Canton. Upper parts rich brown, with a tint of chestnut and olive, the former strongest on the head and wings. A well-defined cream-coloured eyebrow runs over the eye. The feathers of the head edged darker, giving the appearance of scales; under parts white, with an occasional tinge of buff; axillaries and flanks olive-brown; wing 2.1, short and rounded, the fourth quill being the longest, the third and fifth 12th shorter, and nearly equal. The specimen is unfortunately tailless, and I therefore cannot give a very detailed description of it.

156. LOCUSTELLA HENDERSONII, Cassin, Proc. Phil. Acad. Sciences, 1858, p. 194.

L. macropus, Swinboe, P. Z. S. 1863, p. 93.

Allied to Sylvia locustella, L., of Europe, but with conspicuously larger feet. I have only procured it in South China in summer. If ours is the same as that spoken of by von Schrenck as occurring in Amoorland in May, the summer resort of our bird will be of vast extent, and it will probably be the same species found in Siberia, and reported visiting the plains of Hindostan in winter. The bird from Hakodadi (Japan), described by Cassin, would appear to be identical with the Locustella from Amoorland and this species.

157. LOCUSTELLA MINUTA, Swinhoe, P. Z. S. 1863, p. 93.

A diminutive species resident in South China, procured at Amoy and Canton.

158. LOCUSTELLA OCHOTENSIS, Middendorff, Sib. Reis.

With stronger legs and feet than most species of this genus. Von Schrenck considers it the same as *L. certhiola*, Pall.; but that is a larger and distinct bird, with apparently a more western range through Siberia. This is a summer visitant to North China, the Amoor, and Japan. In South China it has occurred only in winter.

159. CALAMODYTA SORGHOPHILA, Swinhoe, P.Z.S. 1863, p. 92.

The eastern representative of *C. phragmitis* of Europe. I procured one specimen on the 20th of May at Amoy. It would appear to be a summer visitant to the South of China. No Sedgewarbler is noted from the Amoor.

160. CALAMOHERPE BISTRIGICEPS, Swinhoe, Ibis, 1860, p. 51. Calamodyta maackii, von Schrenck, Amurland.

I first procured this bird on the 25th of October 1856, and described it in The Ibis for January 1860. The same species appears to have been brought from Amoorland by M. Maack, and styled by von Schrenck maackii, after its discoverer, also in 1860, but subsequently to the publication of my name, which will hence have to be adopted. I have three specimens, all from the neighbourhood of Amoy. It is in South China a winter bird, returning to the north in summer.

161. CALAMOHERPE ORIENTALIS, Bp.

Salicaria turdina orientalis, Temm. & Schleg. Faun. Jap. Acrocephalus magnirostris, Swinboe, Ibis, ii. p. 51.

Ranges in China, from Canton to Shanghai, as a summer bird. In the extreme south a few stay all the year. Found in summer also in Formosa and Japan. Is the eastern representative of the European C. turdoides.

162. CALAMOHERPE FUMIGATA, Swinhoe, P. Z. S. 1863, p. 91. Lusciola caligata, Licht. (Motacilla salicaria, Pall.)?

A summer visitant to Sonth China. Abundant on the Island of Amoy for a few days in the middle of May.

163. CALAMOHERPE AËDON.

Turdus aëdon, Pallas.

Arundinax olivaceus, Blyth.

I have a specimen from the Andamans presented to me by Mr. Blyth, and another from Tientsin, both precisely identical. It is figured by von Schrenck from the Amoor. I have not yet met with it in South China. It summers in Siberia, North China, and Amoorland, and winters in Hindostan, probably extending during that season along the Malayan peninsula and into the Andamans.

164. CALAMOHERPE CANTILLANS.

Salicaria cantillans, Temm. & Schleg. Faun. Jap.

One specimen procured by Mr. Fleming at Tientsin. It would appear to replace in North China and Japan the following species of the south.

165. CALAMOHERPE MINUTA.

Arundinax minutus, Swinhoe, Ibis, 1860, p. 52.

This bird arrives from the south to spend the summer in South China. A few, however, occur all the year. It is a curious diminutive of the following, though entirely distinct in manners and song.

166. CALAMOHERPE CANTURIANS.

Arundinax canturians, Swinhoe, Ibis, 1860, p. 52.

Abundant from Canton to Shanghai, and in Formosa. A south-wardly migration takes place in winter, but numbers stay all through the year. As the *C. cantillans* replaces the *C. minuta* north of Shanghai, so I suspect the *C. cantans* of Japan replaces this species in that region.

167. DRYMŒCA EXTENSICAUDA, Swinhoe, Ibis, 1860, p. 50.

Female smaller than male, with shorter tail. Winter plumage more strongly tinted with buff than summer. Bill in winter light-coloured, in summer black. For notes on the habits of this bird, see my different lists in The Ibis. Found as a constant resident in South China, from Amoy to Foochow; also in Formosa.

168. PRINIA SONITANS, Swinhoe, Ibis, 1860, p. 50.

A resident in South China, from Canton to Foochow; also in Formosa.

169. ORTHOTOMUS PHYLLORRHAPHEUS, Swinhoe, Ibis, 1860, p. 49.

An abundant resident in South China, from Canton to Foochow. The male acquires long central tail-feathers in spring.

170. CISTICOLA SCHŒNICOLA, Bp.

C. cursitans, Franklin.

C. brunneicephala, Temm. & Schleg. Faun. Jap.

C. tintinnabulans, Swinhoe.

Common at Shanghai in summer, extending its range to Pekin. The majority from the north wend sonthwards, and pass the winter in South China, at which season only I have found it near Amoy. In south-west Formosa it is resident. It has also been noted from Japan, but not from the Amoor. I have, in company with Mr. Tristram, compared Chinese, Formosan, and Indian examples with European specimens, and can note no tangible differences.

171. PHYLLOPNEUSTE FUSCATA.

Phylloscopus fuscatus, Blyth, J. A. S. xi. p. 113; xii. p. 965. Phyllopneuste sibirica, Middendorff, Sib. Reise, ii. tab. 16.

Summers in Siberia, North China, and Amoorland, and winters in South China and the plains of Hindostan. A few, I suspect, stay all the year in South China. It varies much in size and length of wing. I have one very large specimen from Amoy, evidently only an individual variety.

172. PHYLLOPNEUSTE TENELLIPES.

Phylloscopus tenellipes, Swinhoe, Ibis, 1860, p. 53.

Found about Amoy and South China during winter; probably winters in North China, but has not yet been noted thence, nor yet from the Amoor. I have three specimens from Amoy. Length 4.4; wing 2.3; tail 1.9. Bill brown, paler at edges, tip, and base of gonys; inside of mouth light yellow. Legs and claws pale flesh-colour. This is one of the most distinct species of this group, and in colouring holds a place between the foregoing brown bird and the greener forms.

173. PHYLLOPNEUSTE SYLVICULTRIX.

Phylloscopus sylvicultrix, Swinhoe, Ibis, 1860, p. 53. P. javanica (Horsf.), Blasius, Ibis, 1862, p. 69?

I have nearly 200 examples of this species from Amoy, which differ in general size, in the length and bulk of the bill, in the length of the wings and of the first primary, and in the tints of the tarse. Were two of the extreme forms taken separately, some naturalists would be inclined to set them down as distinct species; but with my large series of every intermediate grade and form before one, the special points of distinction disappear, and one cannot help avowing them all to be the same. In this view Mr. Tristram, who has kindly examined them with me, entirely concurs. All the Chinese forms of Phyllopneuste, with the exception of the P. fuscata, show more or less yellowish spots on the wing—a distinction which does not appear to be shared by any of the European forms. In this character the wings of our birds show some affinity to the well-banded wing of the Reguloides group, to which they further approximate in the shape of their tails.

P. sylvicultrix visits Amoy in large numbers during its autumnal and vernal migrations. It probably summers in the interior of China and about Ningpo and Shanghai. I have procured it in autumn in south-west Formosa, and I have reason to believe it winters in the Philippines. Its great destroyer is the Lanius lucionensis, Strickl., which migrates about the same time, passing Amoy in immense numbers, and crossing over to the Philippines via southwest Formosa. Professor Schlegel showed me some Willow-wrens, I think from Halmahein, which seemed identical with Chinese examples of this bird. These would doubtless be the same that Professor Blasius refers to as P. javanica, Horsf. (see Ibis, 1862, p. 69). The type specimen of Horsfield's Sylvia javanica in the East India Museum is, however, a Zosterops, as demonstrated by Mr. Blyth and others years ago. It is not at all improbable that our P. sylvicultrix spreads in winter throughout the Malayan Islands. The various Chinese species of Phyllopneuste, with the exception of P. fuscata, Mr. Blyth and I have ascertained by actual comparison to be quite distinct from those found in India.

174. PHYLLOPNEUSTE XANTHODRYAS, n. sp.

3, shot at Amoy on the 23rd of April 1861. Length 5.5; wing 2.9; tail 2.3. First primary pointed, 65; second 4, shorter than the third, which is nearly of a length with the fourth and fifth. Bill blackish brown on the upper mandible; edge of ditto, tip, and lower mandible yellow-ochre, rather dingy on the latter. Inside of mouth light orange-yellow. Eyelid light black. Legs and claws pale brown, with a tinge of yellow on the feet and claws.

Q, shot on the 20th of May, at Amoy. Length 5.4; wing 2.7; tail 2.2. Bill and gape less yellow than before, the former browner.

Legs light sienna-vellow, tinged with brown.

This is the largest Phyllopneuste I have met with in China. It approaches P. coronata nearest in size of bill, but has no coronal stripe, and the under parts are much yellower. From P. sylvicultrix it is easily recognized by its much superior size, its yellow under parts, its more robust claws, the larger size of the first primary, and the greater difference between the second and third.

The gizzard of one dissected was round, compressed on the sides, with a large circular tendon on each side. It was lined internally with a thick rugous epithelium, and contained remains of flies.

This species may, I think, be considered as a summer visitant to Central China from the south, passing Amoy en route.

175. PHYLLOPNEUSTE PLUMBEITARSA.

Phylloscopus plumbeitarsus, Swinhoe, Ibis, 1861, p. 330. Phyllopneuste rufa, von Schrenek, Amurland. P. borealis, Blasius, Ibis, 1862, p. 69?

I have only one specimen of this bird, procured near Pekin in October, which I take to be an individual migrating southwards from its summer quarters in Amoorland. From that region von Schrenck gives P. rufa; and, from its approach to that species, the bird mentioned by that authority would naturally be our species. But from P. rufa ours is at once distinguishable by its short thicker bill, and by the yellowish tips to its lesser and greater wing-coverts. In the shape of its bill, ours has more affinity with P. eversmanni of Siberia, figured in Middendorff, Sib. Reis., but differs also from that in its yellowish wing-markings.

176. PHYLLOPNEUSTE CORONATA.

Ficedula coronata, Temm. & Schleg. Faun. Jap.

This is a summer visitant to North China and Japan, repairing in winter to South China, at which latter season it occurs at Amoy. Reguloides trochiloides, Sundevall, is a closely allied species from India, but is smaller, has a smaller bill, and brighter yellow tips to wing-coverts. It is the representative race of our species in more Western Asia, and ought perhaps, with ours, rather to be included in this genus than among the pseudo-Goldcrests.

177. REGULOIDES SUPERCILIOSUS (Gm.).

Regulus modestus, Gould.

Summers in North China and Japan, and is abundant during the cold season throughout Southern China and Formosa. It is then also said to occur in the plains of Hindostan. The bird shot by Mr. J. Hancock, of Newcastle, on the coast of Yorkshire I have lately had the privilege of examining, and find to be identical with my Chinese examples.

178. REGULOIDES PROREGULUS, Pall.

A summer visitant to North China, and a winter visitant to South China. Recognized at once from the foregoing by its yellow rumpband. I have procured this, as well as the last, near Pekin in September; and I hence infer that this also ranges into the Amoor territory, and has been confounded by von Schrenck with the above.

ZOSTEROPIDÆ.

179. ZOSTEROPS SIMPLEX, Swinhoe, P. Z. S. 1862, p. 317, et Ibis, 1863, p. 294.

This species ranges in China, from Canton to Foochow, and perhaps a little higher, but not to Shanghai, where it is replaced by the following. In Formosa it is also an abundant resident. On its nesting and habits I have already written much in The Ibis, and therefore will not here repeat my remarks. It has its nearest ally in the Z. palpebrosa of India, being, like it, light grey on the under parts. An occasional specimen or two, however, may be picked out of my Amoy series with a tinge of chestnut-brown on the under parts, showing the tendency of the species towards the Japanese Z. japonica. Some have the belly deeper grey than others. The yellow on the throat and

vent varies in intensity, as also does the green of the upper parts; but these are chiefly distinctions of sex or age. I have one pale (almost yellow) variety, procured by Captain Blakiston at Canton. All the adults have the black lore and eye-line, shown also in the following and in many of this group. I have specimens from Hongkong, Macao, Canton, Amoy, Foochow, and Formosa, and they all agree in essential characters.

180. Zosterops Eythropleura, Swinhoe, P. Z. S. 1863, p. 204.

This species, which extends from Shanghai to Tientsin and the Amoor, I had confounded with the Z. japonica of the 'Fauna Japonica,' until lately, when, on a visit to M. Jules Verreaux at Paris, I had the pleasure of examining for the first time a Japanese specimen, and of comparing it with North China skins. The difference in the two birds is striking. The under parts of Z. japonica are a dull light brownish chestnut, while the flanks of this species are a deep rusty chestnut. This bird is larger and longer-winged than our South-China species, but is exceeded in both by the Japanese. I have examined two specimens from Shanghai from M. Jules Verreaux's collection, and one from Tientsin. The two former are much brighter on the flanks than the latter; but as they are both males, and our Tientsin bird is a female, the difference may be only a sexual one, and not one of locality. What could have induced von Schrenck to confuse this species with the Z. chloronota, Gould, of Australia, I cannot understand. The shape of the bill and head of this last, as well as the dull sordid colour of the plumage, show at once a marked difference from the Chinese bird. Indeed there are many species from Asia and Africa far more closely allied to our species than is the Z. chloronota. As I have never met with the North China species alive, except as a cage-bird, I have nothing special to relate regarding its habits.

AMPELIDÆ.

181. LIOTHRIX LUTEA.

Sylvia lutea, Scopoli. Tanagra sinensis, Gmel. Parus furcatus, Temm.

Often seen alive in cages at Canton. Is said to be brought from the interior. I never met with it in a wild state.

182. Ampelis garrula, L.

Occasionally met with in North China during winter.

FRINGILLIDÆ.

183. FRINGILLA MONTIFRINGILLA, L.

Met with in North China during winter. Summers in Amoorland. Captain Blakiston killed one out of a small party at Shanghai in January.

184. ÆGIOTHUS LINARIUS, L.

185. ÆGIOTHUS CANESCENS, Gould.

Both these species come down into North China from Amoorland and the north during winter.

186. Chrysomitris spinus, L.

Comes down from the north in winter, as far south as Foochow.

187. CHLOROSPIZA SINICA, L.

Fringilla kawariba minor, Temm. & Schleg. Faun. Jap.

Common throughout China, from Canton to Pekin, at all seasons. A larger race occurs in some parts of Japan, while in others its place is said to be supplied by this bird.

188. CARPODACUS ERYTHRINUS, Pall.

Procured at Tientsin. Is said to be taken occasionally near Canton during winter.

189. COCCOTHRAUSTES MELANURUS, Gmel.

A common resident bird from Canton to Shanghai. I have not traced it further north. Is replaced in Japan by a near species, C. personatus.

190. Coccothraustes vulgaris, Ray.

Found in Amoorland, about Pekin, and at Japan. I have not discovered it in the more southerly part of China.

191. Loxia curvirostra, L.

A winter visitant to North China. Is found in Amoorland, where L. leucoptera is said also to occur. Brought from Hakodadi, North Japan.

192. Munia oryzivora, L.

Found about Canton, and occasionally near Amoy. A South-China bird, extending to the Straits of Malacca and Java.

193. Munia topela, Swinhoe, Ibis, 1863, p. 90.

A common resident from Canton to Foochow, and in Formosa.

194. Munia acuticauda, Hodgs.

An abundant resident from Canton to Shanghai, and in Formosa. Is domesticated in Japan, where it also probably occurs in a wild state, though it has not been noted from there.

195. Passer montanus, L.

The common House-Sparrow throughout China, the Amoor, Formosa, and Japan.

196. PASSER RUSSATUS, Temm. & Schleg. Faun. Jap.

The Tree-Sparrow of China, Japan, and Formosa. The female

of this species presents a plumage like that of the female P. domesticus, L.

197. Euspiza Rutila (Pall.); Bp. Consp. Av. p. 469.

Found in Siberia, Amoorland, and Japan. A few wend their way southwards in winter. I have procured it at Amoy, where it is extremely scarce.

198. Euspiza aureola (Pall.); Bp. Consp. Av. p. 468.

Summers in North China, Amoorland, and Japan, and winters in South China, and plentifully in Burmah. Abundant about Canton and Amoy during the cool season. Known to Europeans in China as the "Canton Ortolan."

199. Euspiza sulphurata.

Emberiza sulphurata, Temm. & Schleg. Faun. Jap.

Summers in Japan, and winters in South China. Numbers touch Amoy on the northward migration in April. Has not been noted either from North China or the Amoor. In Sir William Jardine's Life and Memoirs of Mr. Hugh Strickland,' a bird is described and figured as *Euspiza cinerea* from Smyrna, which looks much like a larger representative race of this species.

200. Melophus melanicterus (Gmel.); Bp. Consp. Av. p. 470.

Abundant at all seasons about Canton, Macao, and Amoy, extending upwards to Foochow, but I do not think much further north.

201. EMBERIZA PITYORNIS (Pall.); Bp. Cousp. Av. p. 466.

Siberia, North China, and the Amoor. I met with it at Pekin in October.

202. Emberiza spodocephala, Pall.

E. personata, Temm.

E. melanops, Blyth.

I have a large series of this bird, all shot at Amoy, in various stages of plumage, answering to the three so-called species. The entire grey head and neck, and black round the bill, are put on by the male in full plumage; and the yellow tints of the under parts vary in hue and intensity. Von Schrenck notices the two first from Amoorland as distinct species; and Mr. Blyth has described the third as an occasional straggler in North-eastern India. In winter it visits the south of China in large numbers, returning on the approach of summer to North China, the Amoor, and Japan.

203. EMBERIZA CIOPSIS, Bp.

E. cioides, Temm. & Schleg. Faun. Jap.

This species is found in North China, Amoorland, and Japan. It is a winter visitant to South China.

204. Emberiza Rustica (Pall.); Bp. Consp. Av. p. 466.

North China, the Amoor, and Japan. Not yet met with in South China.

205. Emberiza fucata (Pall.); Bp. Consp. Av. p. 464.

Winters in South China. Found in summer in North China and Japan.

206. Emberiza strachevi (Moore); Swinhoe, Ibis, 1863, p. 9. Procured at Tientsin (Fleming), and at Kumaon (Strachey). Nothing is known of its movements or distribution.

207. EMBERIZA CHRYSOPHRYS (Pall.); Bp. Consp. Av. p. 464. Siberia, and probably Western China. I procured a specimen near Pekin in September.

208. Emberiza canescens, Swinhoe, Ibis, 1860, p. 62.

Occurs in South China in winter only; probably retires to North China to breed.

209. Emberiza pusilla (Pall.); Bp. Consp. Av. p. 464.

Abundant in North China near Pekin, some visiting South China in winter. Found also in Amoorland.

210. SCHENICOLA PASSERINA, var. β , Pall. Zoogr. Ross. Asiat. ii. 48, 49.

Emberiza schæniclus, var. minor, Midd. Sib. Reise. E. polaris, Midd.?

Amoorland and North Japan. It is doubtless also a North-Chinese bird.

211. Plectrophanes nivalis, L.

Visits North China in the cold weather.

212. CENTROPHANES LAPPONICA, L.

Abundant near Pekin in winter.

STURNIDÆ.

213. STURNUS VULGARIS, L.

I include this bird in my Chinese list on the anthority of a specimen in the British Museum, said to have been brought by Mr. Reeves from Canton. I have never met with the bird.

214. STURNUS CINERACEUS, Temm. & Schleg. Faun. Jap.

Summers in Japan and North China to the Amoor. Visits South China in large flocks during winter.

215. STURNUS SERICEUS, Gmel.

A resident species from Canton to Shanghai, extending probably

further north. In winter assembles in large flocks and ranges about the country, often associating with the foregoing.

216. Hetærornis sinensis.

Oriolus sinensis, Gmel. O. buffonianus, Shaw. Pastor turdiformis, Wagl. Sturnia cana, Blyth.

Arrives in large numbers in spring in South China, frequenting houses, and building in the holes of their roofs. It stays the summer, and then disappears. It is in that season very common from Canton to a little above Amoy, not extending so far north as Foochow. Its winter migration appears to extend into Pegu, whence identical specimens have been received. All the species of this genus become strongly tinged in the breeding-season with a rusty buff, very bright in parts. In the autumn the moult takes place, when the feathers resume their natural colour. What is the cause of this tint I cannot divine; but, to show how strong it is, Mr. Blyth named the species from the Nicobars H. erythropygius, from its red rump. The next specimen he procured was later in the season, and the red-tinged parts had moulted into their natural white colours. This tinge is perhaps analogous to that of the breast of Gypaëtus barbatus, of the Teal, and of several other birds. In our bird it is too generally diffused to suppose that it has been rubbed on extraneously. It comes doubtless from the body of the bird, and must owe its origin to some constitutional peculiarity.

217. HETÆRORNIS DAURICUS.

Sturnus dauricus, Pall. Turdus dominicanus, Gm. Pastor malayensis, Eyton.

Found in North China and Amoorland in summer; its southward migration would appear to extend into Hindostan, the Malayan peninsula, and Java, whence specimens have been received. It does not appear to travel down the Chinese coast to its winter destination, or we should have met with it in South China, which we never have. It probably takes an inland route through Daouria, whence Pallas

obtained and described his type specimens.

This species is replaced in Japan by the little H. pyrrhogenys, Müll. (Lamprotornis pyrrhopogon, Schleg. Faun. Jap.), which is there a summer visitant only, being found during the winter in the Philippines, whence I have received skins. I naturally expected to find it touching on its travels at Formosa, but did not; nor have I ever come across it on the Chinese coast. I may here remark that a specimen of this bird sent to Mr. Blyth was described by him as a new species, under the name Calornis albifrons.

218. Acridotheres cristatellus, L.

Found in China as a resident species, from Canton to Shanghai.

Abundant also in Formosa. Is found also in the Philippines, whither it is said to have been conveyed originally for the destruction of locusts. The members of this genus are closely allied, but very local in their distribution. Great confusion exists in their nomenclature; but the description of Linnæus doubtless refers to the Chinese Star-

ling so called, though he describes it as a bird from Bengal.

There is quite a peculiar species in Siam, which I have received from Sir Robert Schomburgk, H. M. Consul at Bangkok. This in coloration is a good deal similar to the Chinese bird, but has the bill a bright yellow, instead of light lemon-colour; its vent is pure white, instead of black tipped with white; its nasal crest is much smaller, and the pointed feathers on its crown much longer, than in ours; its rectrices are, moreover, much more largely tipped with white. In size and other respects the two nearly agree. For this I would now propose the name A. siamensis.

219. Gracupica nigricollis.

Gracula nigricollis, Paykull.
Pastor bicolor, Gr.
Pastor temporalis, Wagl.
Sturnus temporalis, Blyth.
Gracula melanoleuca, Sonnerat.
Gracupica melanoleuca, Less.

A resident species in South China, from Canton to Foochow; extends in its distribution as far south as Siam. Its bare cheeks, when alive, are bright yellow, and not red as stated in Bp. Consp. Av. p. 421. The immature bird has the head and neck light brown, and its general colours are much lighter than in the adult.

CORVIDÆ.

220. PICA CAUDATA, Ray, var. media.

P. media, Blyth. P. sericea, Gould.

The Magpie is an abundant resident throughout China, Amoorland, Kamtschatka, Japan, and Formosa. On specimens procured from these different regions two additional species have been created, founded on the variation of the length of wing and expansion of alar white,—P. japonica, Bp., and P. media, Blyth. My specimen from Pekin seems entirely to agree with British skins; but the majority of those from Amoy differ in the tints of the tail, and in having much less white on the quills. I have, however, from that locality one which is identical with the Pekin bird. On examining nestlings and young birds, I find that the alar white is again much less; and, on carefully comparing my large series of Amoy skins, I find great variation in length of wing, in the tints of the tail, and in the size of the white band on the rump, this last, in some, being scarcely visible. I therefore cannot help reducing the so-called species again into the original one; for, as the Magpie is not a migratory bird, one can scarcely suppose that the true Pekin race would oc-

casionally find its way down to Amoy, a distance of over 1000 miles. We might, perhaps, regard the South-China bird as a race of itself,

with a frequent tendency to revert to the typical form.

The tail of P. caudata from Holland and England is very much bronzed, much more so than that of the Pekin bird, but in no greater degree differing than does the Pekin bird and one from Amoy from the majority of those from that locality. The tail of P. numidica is similarly different from that of the English bird; and, on analogy, it is therefore not improbable that the Amoor bird would more nearly approach the Dutch and English in brightness.

221. CYANOPICA CYANEA, Pall.

Pica melanocephalos, Wagl.

Abundant from Shanghai to Pekin, thence into Amoorland and A resident species. I have not been able to recognize two distinct species in these, as is done by Bonaparte in his Conspectus, p. 382.

222. Urocissa sinensis, L.

A resident species on all the wooded hills from Canton to Ningpo, represented in Formosa by another species, the U. cærulea, Gould. The male has a much larger bill than the female, of a uniform orange-red, and not tipped, like hers, on the apical culmen with black. The young bird has a brownish-yellow bill, brown legs and irides. Crown of head pale grey; nasal feathers, cheeks, and sides of neck light black, lighter on the under neck, and nearly grey on the throat. The rest of the plumage paler and duskier than in the adult.

This species was procured by Captain Blakiston near Ichang, 1100 miles up the Yangtsze; so that its range would appear to extend

throughout entire Southern China.

223. DENDROCITTA SINENSIS, Lath.

Said to inhabit the mountains of South China.

224. GARRULUS SINENSIS, Gould.

Very closely allied to G. bispecularis, Gould, of the Himalayas. Ranges in China from Canton to Ningpo. Further north, it is represented by another species, of which I have no specimens, but which I believe to be the G. brandtii, Eversm., a bird found also in Amoorland, and lately procured in Hakodadi, North Japan, by Capt. Blakiston. South Japan produces an ally of G. glandarius, in G. japonicus, Schleg., and Formosa a diminutive ally of G. sinensis, in G. insularis, Gould.

225. Lycos dauricus.

Corvus dauricus (Pall.), Faun. Japon. t. 41.

Abundant about Pekin, thence ranging north into Amoorland. and west into Siberia. I have not traced it further south into China, It also occurs in Japan.

226. Lycos neglectus.

Corvus (Monedula) neglectus, Temm. & Schleg. Faun. Japon.

This has the same range as the above, and is much more closely allied to the true L. monedula. I have unfortunately no specimens.

227. Corvus Torquatus, Less.

C. pectoralis, Gould.

A resident species in China, from Canton to Pekin. The only species of Crow at Amoy. The male and female do not appear to differ much in size of bill.

228. Corvus sinensis, Gould.

C. corone of Temin. & Schleg. and von Schrenck.

I have four specimens of this bird-a female from Pekin, an immature male from Foochow, and a male and female from Swatow. The northern birds are larger than the southern, but in essential characters they are the same. The distinctness of the Chinese bird from C. corone of Europe Mr. Tristram agrees with me in considering undoubted; and it is hard to understand how, after a comparison, they could ever have been united. C. sinensis has a bill more allied to that of the Ravens than to the Jackdaw-like bill of C. corone. The bill of the male C. sinensis is about one-third bulkier than that of its female, which is about the same proportion larger than that of the male C. corone; that organ is, moreover, well culminated, like that of C. culminatus of India. Apart from the bill, however, there are numerous other satisfactory distinctions. The whole plumage of C. sinensis, except the scapulars, coverts, and secondary-edges, is washed with a green bronze, which in C. corone is purplish, and the feathers of the throat and under neck are lanceolate; the latter marked distinction will enable the most superficial observer to distinguish them. The Chinese is, besides, a good deal larger in size and in length of wing. C. culminatus has a very similar bill to the Chinese bird. In size, it appears to more nearly equal the European species, and in shades of plumage to be intermediate between it and the Chinese, but it likewise wants the strongly acuminate throatfeathers of C. sinensis. The specimens of C. culminatus that I have had for comparison are from Calcutta and the Andaman Islands. I have also C. macrorhynchus, Temm., and C. enca, Horsf., both from Java, sent me by Prof. Schlegel. These are long-billed species, the former being nearly double the size of the latter.

229. Corvus japonensis, Bp.

C. macrorhynchus, Schleg.; Bp. Consp. Av. p. 386.

North China, Amoorland, and Japan.

230. Corvus pastinator, Gould.

C. frugilegus of Temm. & Schleg. and von Schrenck.

An abundant resident from Shanghai to Pekin; extends into Amoorland and Japan. Mr. Tristram agrees with me in consider-

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ing Mr. Gould right in separating this bird from the European Rook; in size they are very similar. The Chinese bird is, however, at once distinguishable by the whole of its head being glossed with purple like the back, the European Rook having the head and face glossed with blue-black. But the greatest distinction is in the peculiar black-feathered throat and chin, these parts in C. frugilegus being quite bare. My specimen was procured in October, at Pekin, and, being in mature plumage, must be over a year old at the least. More specimens are required to determine whether the throat ever does get bare, like the base of the bill, with advancing age; but if this character fail, the different tints of the head will be sufficient to establish the Chinese bird as a distinct race of Rook.

231. NUCIFRAGA CARYOCATACTES, L.

Said to occur in North China. Reported from Amoorland and Japan.

232. FREGILUS GRACULUS, L.

North China; procured near Tientsin. Not noted from Amoorland or Japan.

COLUMBIDÆ.

233. COLUMBA RUPESTRIS, Bp. Cousp. Av. ii. p. 48.

C. leucozonura, Swinhoe, Ibis, 1861, p. 259.

Common about the rocky shores of China in the extreme north, and rocky coast of Mantchuria.

234. TURTUR RUPICOLA (Pall.); Bp. Consp. Av. ii. p. 60.

Found in North China, the Amoor, and Japan. A winter visitant to South China and Formosa.

235. Turtur Chinensis (Scop.); Bp. Consp. Av. ii. p. 63. A resident species from Canton to Shanghai, and at Formosa.

236. Turtur humilis (Temm); Bp. Consp. Av. ii. p. 66.

A summer visitant to South China, ranging in that season as far north as Shanghai and into Formosa.

GALLINÆ.

237. Syrrhaptes paradoxus, Pall.

Abundant about the plains of Pekin and Tientsin during winter. Roams about the country in immense flocks, flying in figures, as do Plovers and most sea-birds.

238. Crossoptilon Mantchuricum, Swinhoe, P. Z. S. 1862, p. 287.

One specimen procured through Dr. Lamprey at Tientsin. Said to have come from Mantchuria.

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239. Phasianus torquatus, Gmel.

Found throughout China, up into Amoorland.

240. Phasianus reevesii, J. E. Gray.

Central China and borders of Mongolia.

241. THAUMALEA PICTA, L.

China bordering on Thibet and Mongolia.

242. Thaumalea amherstiæ (Leadb.).

China bordering on Eastern Thibet.

243. Euplocamus nycthemerus, L.

Nycthemerus argentatus, Swainson.

Wooded mountain-country of Southern China.

244. Polyplectron chinquis (Temm.); Blyth's Cat. p. 241.

Specimens in the British Museum from Mr. Reeves, said to have been procured in Southern China.

245. CERIORNIS TEMMINCKII.

Satyra temminckii, Gray.

In British Museum, from Reeves. China.

246. CERIORNIS CABOTI, Gould, Birds of Asia, pt. x.

Said to have been procured in Southern China.

247. Francolinus sinensis.

Tetrao sinensis, Osbeck.

T. perlatus, Gnielin.

T. pintadeus, Scopoli.

T. madagascariensis, Gmel.

A non-perching Francolin, found on the hills of Southern China. Usually met with single, and difficult to flush. Has been introduced into the Mauritius. Male spurred; female with only a wart.

248. Bambusicola Thoracica.

Perdix thoracica, Temm.

P. sphenura, J. E. Gray, Zool. Misc. no. 1, p. 2.

Male spurred; female with only a wart. For remarks on this and its allied Formosan representative, see The Ibis, 1863, p. 399.

249. PERDIX BARBATA, J. Verreaux, P. Z. S. 1863, p. 62, Pl. IX.

Brought to the Tientsin market from the plains adjoining Eastern Siberia. Mentioned by Pallas as a variety of *P. cinerea* inhabiting Dauria. Procured by Middendorff in the Barabá Steppe, and noted by him in his 'Sib. Reise' as *P. cinerea*.

250. Coturnix communis, Bonnaterre.

Tetrao coturnix, L.

C. dactylisonans, Temm.

Found throughout China, in the north as a summer bird, in the south chiefly as a winter visitant, though many stay to breed. I have procured their eggs at Amoy. It is found also at Japan and in Formosa, but is not noted from the Amoor.

251. Excalfactoria chinensis.

Tetrao chinensis, L.

Has a wide range throughout Southern Asia and its islands to Australia. Found in Southern China and Formosa, and has been introduced into the Mauritius.

252. Turnix maculosa, Temm.

Occurs sparsely throughout China from Canton to Pekin; and I suspect also in Formosa, though I did not procure specimens. Mr. Blyth considers the Chinese race the same as that from Burmah, which he has lately described as T. blanfordi (Journ. As. Soc. Beng. 1863, p. 8). He says it holds the same relationship to T. dussumieri, Temm., of India, that the T. sykesi of India holds to the T. andalusica of S. Europe and N. Africa.

253. TURNIX OCELLATA.

Oriolus ocellatus, Scop. Tetrao luzoniensis, Gmel. Hemipodius thoracicus, Temm.

Inhabits Southern Asia and its archipelago, to the Philippines. Occurs also in Southern China and Formosa.

GRALLÆ.

254. Otis tarda, L.

We frequently hear in China of Bustards, though I have never met any. They are brought to the Tientsin market from the neighbouring plains, and through the kindness of Dr. Lamprey I have been enabled to procure a sternum. This agrees entirely with that of the European Bustard, which is also noted from the Amoor. In South China probably other species occur.

255. GRUS CINEREA, L.

G. cinerea longirostris, Faun. Jap.

North China to Amoorland and Japan. Visits South China in winter in large flocks, frequenting cultivated fields, and feeding on sweet potatoes (Batatas edulis).

256. GRUS LEUCOGERANOS, Pall.

North China, Amoorland, and Japan.

257. GRUS VIRIDIROSTRIS, Vieill.

Antigone montignesia, Bp. Consp. Av. p. 100.

North China and Japan. Frequently seen in captivity at Shanghai. Emblem of longevity among the Chinese, and the subject of many pictures and works of art.

258. GRUS MONACHA, Temm.

North China and Japan.

259. GLAREOLA ORIENTALIS, Lath.

In all marshy plains throughout China, as far north as Pekin; also abundant in Formosa. Not noted from the Amoor or Japan.

260. VANELLUS CRISTATUS, Meyer & Wolf.

North China from Shanghai to Pekin and Amoorland. Shot by Captain Blakiston, at Shanghai, in January.

261. LOBIVANELLUS CINEREUS, Blyth, J. A. S. B. xi. p. 587. Chætusia wagleri, Bp.

Common on the banks of the Yangtsze, Central China, in summer, whence it probably migrates southwards to the plains of Hindostan. A specimen brought by Captain Blakiston agrees entirely with those from India. The Lobivanellus inornatus of Japan is said to be distinct. One shot at Amoy was referred by Mr. G. Schlegel to that species, but it may have been the bird that migrates to India. It is said to be extremely rare in Japan; hence it is not unlikely that a few only straggle there, as the bird we procured straggled to Amoy.

262. SQUATAROLA HELVETICA, Gmel.

Winter visitant to the coasts of China and Formosa from the north.

263. CHARADRIUS LONGIPES, Temm.

C. virginicus of my previous lists.

Throughout China and Japan. Many stay to breed about South China and Formosa. The females are smaller than the males, and their eggs unusually small.

264. Eudromias morinellus, L.

Observed by Middendorff in North-eastern Asia in June and August. Procured, according to Cassin, at Hakodadi (North Japan).

265. ÆGIALITES LESCHENAULTII.

Charadrius leschenaultii, Less.

C. geoffroyii, Wagler.

C. asiaticus (caspius), Pall.

Hiaticula rufina, Blyth.

On all the coasts of Southern Asia. Somewhat rare on Chinese coast. Common in Formosa, where it stays the whole year and breeds. This appears to be the largest of this group, and has a heavy black bill. Ægialites hiaticula, L., of Europe, is said by

Temminck to have been procured from Japan, but I should think it extremely doubtful. Mr. Tristram has an undoubted specimen of this species, shot by himself between Cairo and Suez in February. This is the most westerly occurrence of this bird I have heard of.

266. ÆGIALITES MONGOLICUS.

Charadrius mongolicus, Pall.; Midd. Sib. Reise.

C. ruficollis, Cuv.

C. pyrrhothorax, Temm. C. cirrhipedesmos, Wagler.

C. sanguineus, Less. C. rufinellus, Blyth.

Inland plains of North China, Mongolia, and Amoorland. Common in winter in Lower Bengal. It appears rarely, if ever, to come to the sea-coast, and is probably a Dotterel, though it has many affinities with the Sand-plovers.

267. ÆGIALITES CANTIANUS.

Charadrius cantianus, Lath. (alexandrinus, Pall.).

Though not noted by von Schrenck from the Amoor, I suspect the summer resort of this bird extends as high up as Kamtschatka. I found it at Talienwan, and in winter we receive large accessions to our resident numbers from the north. It is, I think, entirely a bird of the coast, never being met with inland. The birds that stay to breed on the coasts and islands of South China and Formosa can at once be recognized by their flesh-coloured legs, which in the arrivals from the north are leaden. Our southern birds are, moreover, larger, very pale, in some cases almost white, and never, to my knowledge, attain aught but an indication of the bright rufous and black that adorn the head of the northern form. A similar resident race has been procured on the coast of California, and separated by Cassin as a distinct species under the term Hiaticula nivosa. I do not think we can regard this form other than as a climatal or incipient species, or, if the term be preferred, conspecies.

268. ÆGIALITES PHILLIPINUS.

Charadrius philippinus, Scopoli.

C. minor, Meyer, and of British authors.

C. curonicus, Beske.

Abundant on the coasts of China and Formosa, where many spend the whole summer. Extends into Amoorland and Japan. Is somewhat an inland bird, and frequently found on the sandy banks of rivers, and in winter on freshly ploughed fields, margins of pools, marshy grounds, and wet rice-fields.

269. Hæmatopus longirostris, Gray.

H. ostralegus, L., of my former lists.

Bill an inch and more longer than in H. ostralegus, and differently shaped. It never has the white collar, even when immature, and

has more white on the tail, especially on the outer feathers. Winter visitant to south coast of China, thence to the Indian Archipelago. Found in summer at Talienwan. Extends up the coast of Mantchuria to northern latitudes in summer, at which season it also occurs in Japan.

270. Hæmatopus niger, Pall.

Kurile Isles, Sagalien, and Sea of Ochotsk.

271. RECURVIROSTRA AVOCETTA, L.

Winter visitant to South China. Summers probably in North China and Amoorland.

272. Totanus glottis, L.

T. glottoides, Vigors.

Visits the coasts of China, Japan, and Formosa in winter.

273. TOTANUS STAGNATILIS, Bechst.

Rare on the Chinese coast. Seen occasionally during winter on the coast in small flocks. A specimen procured in Formosa. It also appears to be rare on the coasts of North-eastern Asia; for Middendorff procured it only once on the shores of the Sea of Ochotsk.

274. Totanus fuscus, L.

Winter visitant to south coast. Specimens procured at Macao and Tientsin.

275. Totanus calidris, L.

Commoner than the last in winter, though both somewhat rare. Specimen procured in Formosa.

276. Totanus glareola, Gmel.

Common in small flocks in marshy places in September and October in South China, just arrived from the north, and evidently bound to more southerly latitudes. Disappears in winter, and returns late in spring, bound north. Never seen on the coast.

277. TOTANUS AFFINIS, Horsf.

I procured one of this species out of a small party in a rice-field near Amoy, on the 12th of September 1859. The flight and note of the bird struck me as peculiar at the time. It is most nearly allied to T. glareola, from which it is at once distinguished by the deep olivetint of the upper parts, the head and back being destitute of spots, by the few whitish spots of its wing-coverts and tertiaries, which are, on the other hand, spotted with black, in these respects resembling T. ochropus. The tail, however, is closer to that of T. glareola; but the central feathers are more olive, and with few white markings. The breast is washed on the sides with olive-brown, and has no spots. The tarsus is shorter than in either T. glareola or T. ochropus, as also the bill. Mr. Tristram agrees with me in considering it a good species. It has also considerable affinity with T. hypolencus.

278. Totanus ochropus, L.

Seldom found on the coast. Rather solitary in habits. A few stay all the year in South China.

279. Totanus brevipes, Vieill.

T. pulverulentus (Müll.), Faun. Jap.

T. glareola, Pall.

T. griseopygeus, Gould, Birds of Austr.

T. fuliginosus, G. R. Gray, G. of B. (winter).

Found on Chinese coast in winter, but much commoner during the early part of that season in Formosa. Extends its winter migration to the Indian Archipelago and to Australia. Procured also from Japan, where it probably breeds. Not noted from Amoorland by von Schrenck, but has been procured from Kamtschatka and the Sea of Ochotsk.

280. Totanus hypoleucus, L.

T. empusa, Gould, Birds of Austr.

Tringoides hypoleuca of previous lists.

Everywhere a common resident species on the coast and on banks of rivers. Associates in flocks and parties in winter, and in rigorous weather shifts southwards.

281. MACHETES PUGNAX, L.

From Kamtschatka and Siberia, where it summers, visiting India and interior of China in winter.

282. TEREKIA CINEREA.

Scolopax cinerea, Gmel.

Limosa recurvirostra, Pall.

L. cinerca, apud von Schrenck.

Procured in summer plumage at Tientsin, and noticed as a summer bird in Amoorland. I have never observed it on the South Chinese coast, and it is not improbable that it migrates southwards through the interior. Is a common winter bird in India and its archipelago, and has been procured in that season in Australia.

283. Limosa uropygialis, Gould, Birds of Austr.

Procured only once at Amoy in early spring. Not noted before from any part of East Asia. This is probably the species procured in Java and Timor, and not the *L. lapponica*, as has been recorded. Probably breeds in North-east Asia, and migrates south-easterly, a few occasionally finding their way to the Chinese coast. No short-legged Godwit is noted from Hindostan (see Blyth's 'List'). My specimen is identical with Australian specimens, and was procured at Amoy. Middendorff gives *L. rufa* seu *lapponica* from North-east Asia; but I strongly suspect it will be found to be this species, for both forms could hardly be expected to occur together. *L. rufa* is also recorded by Schlegel from Japan.

284. LIMOSA ÆGOCEPHALA, L. (L. melanura, Leisler).

L. melanuroides, Gould, Birds of Austr.

Never observed on the Chinese coast, and not noted from the Amoor by von Schrenck. Middendorff found young birds on the great Schantar Island on the 11th August. Said to be found on lakes and inland marshes of China, whence it is brought to the Tientsin and Shanghai markets in winter. It is probably from Mantchuria that these birds come, spreading down to the Indian Archipelago southwards, and eastwards to North Australia, to both of which places they resort in winter. Temminck and Schlegel note it from Japan.

285. PSEUDOSCOLOPAX SEMIPALMATUS, Jerdon, Blyth, J. A. S. xvii. 252.

Micropalama tacsanowskia, J. Verreaux, Revue de Zoologie.

Summers in inland Northern China and Mongolia, migrating overland in winter southwards, occasionally into the plains of Hindostan. Messrs. Jerdon and Blyth have procured it near Calcutta and on the Coromandel coast in the cool season. I have one in partially moulted plumage, shot in autumn at Hankow, Central China, and another in full summer plumage from the neighbourhood of Tientsin. In its bright rufous summer garb, and in almost every particular, this bird is a perfect Godwit. You have only to cut off the bill, and it is almost undistinguishable from Limosa uropygialis. It forms the same connecting link between Limosa and Scolopax that Macroramphus griseus appears to form between Totanus and Scolopax.

286. SCOLOPAX RUSTICOLA, L.

Very common in North China and Japan during winter. Frequent, but rarer, during the same season on the hills of Southern China. Curiously enough, it is not noted from Amoorland. Specimens identical with the European bird.

287. Gallinago solitaria, Hodgs.

Scolopax hyemalis (Grismann), Midd. Sib. Reise.

I procured a specimen one winter on the hills of Amoy, which was identified by Mr. Blyth as of this species. The specimen was unfortunately never returned to me; so I have not been able to compare it with skins in museums in England. It is said by Messrs. Temminck and Schlegel ('Fauna Japonica') to be also found in South Japan. If so, we can easily account for its presence in Amoy. My specimen haunted for several weeks a mountain stream, and did not care apparently to mix with the Snipes of the rice-fields on the plains. I may here remark that a large Snipe, brought by Captain Blakiston from North Japan, was identical with G. australis, Gould, of Australia (see The Ibis, 1863, p. 416).

288. Gallinago megala, Swinhoe, Ibis, 1861, p. 343. Scolopax palustris, Pall.

This is the Great Snipe of China. I found it on the marshes near Peking in September. At the close of the same mouth it passes down the coast, being found at Shanghai, Amoy, and Canton for a few days only, and apparently bound further southwards. At the end of April and beginning of May it occurs in South China again for a few days, and is then bound north. During the season of its migrations, I procured it also in S.W. Formosa. It does not appear to have been noted in Amoorland; but Pallas's Great Snipe from Siberia will probably be the same as our bird. Pallas failed to distinguish the Eastern from the Western Great Snipe. His name therefore might with equal propriety be applied to either.

289. Gallinago stenura, Temm.

G. horsfieldii, Gray.

Abundant from Canton to Pekin. It moves about in flocks in winter, but seems to breed in many places throughout China, north and south. Chinese specimens are identical with those from Hindostan and Java.

290. Gallinago scolopacina, Bp.

Scolopax gallinago, L.

S. biclava, Hodgs.

This Snipe appears to be of very general distribution throughout Asia. It is the only one of this genus noted by von Schrenck from Amoorland. In North China it probably breeds; but, as far as my observations go, in South China and Formosa it is only a winter bird.

291. Gallinago burka (Lath.).

G. brehmi, Kaup.

G. uniclava, Hodgs.

The same peculiarity of fourteen tail-feathers, with the long outermost one, occurs in the majority of my Snipes from Canton and Pekin. This is the *common* Snipe of China, visiting the south in large wisps during winter. Indian skins are identical with those from China. It appears to be the Eastern representative of the foregoing, which occurs more sparsely.

292. Gallinago gallinula, L.

Said by sportsmen to be abundant at Canton. I have never met with it, and therefore know nothing of its movements. It may retire northwards by an inland route; but von Schrenck does not note it from the Amoor, and it is not recorded as a Japanese bird.

293. Rhynchea bengalensis, L.

Scolopax capensis, Gm.

R. orientalis, Horsf.

R. sinensis, Lath.

The Cape, the Indian, and the Chinese bird all appear to be the

same species, the female being much larger, and coloured in a more brilliant and variegated manner. It is somewhat sparsely scattered throughout the plains of China, from Canton to north of Foochow; but I do not think it ever occurs so far up as Shanghai. It is a resident species, and generally found solitary or in very small parties.

294. Calidris arenaria.

Charadrius calidris, L. Tringa tridactyla, Pall.

This bird occurs at Amoy and on the South China coast only in September, October, April, and May, its southward destination being apparently in lower latitudes, and its northward much higher, though it is not noted from Amoorland. A few are occasionally met with the winter through.

295. STREPSILAS INTERPRES, L.

The same remarks may be applied to this as the last. I have procured both these birds in summer as well as winter dress at Amoy.

296. Lobipes hyperboreus, L.

Noted from Amoorland. Parties come down our coast as early as October, and some do not return till very late. I have procured them off the Amoy coast in May, in nearly complete summer plumage.

297. PHALAROPUS FULICARIUS, L.

I have not yet observed this species in China, but it occurs in winter in Hindostan. Middendorff found it breeding on the 17th July in S.E. Siberia; and it thence doubtless visits the interior of China, if not the coast. It has been procured from Kamtschatka and the Kurile Islands.

298. Tringa tenuirostris.

Totanus tenuirostris, Horsf. Linn. Trans. xiii. p. 192.

Scheeniclus magnus, Gould, Birds of Austr.

T. crassirostris, Temm. & Schleg. Faun. Jap. 1850.

Noted from Amoorland and Japan. A few occasionally come down the China coast. I have one from Shanghai. Its migrations from the Amoor are doubtless in a more easterly direction, towards Australia, touching at Japan, from both which countries it has been brought.

299. Tringa canutus, L.

Noted from Amoorland. Extremely rare in China. I have a young specimen from Shanghai.

300. Tringa maritima, Brünn.

Three specimens procured out of a flock, on the 9th August, by Middendorff in Amoorland, lat. 75°.

301. TRINGA PLATYRHYNCHA, Temm.

Rare on the Chinese coast, but pretty common in early winter on the mud-flats of Formosa.

302. Tringa rufescens, Vieill.

A single specimen procured by Middendorff, on the 30th June, on the south coast of Sea of Ochotsk.

303. TRINGA CINCLUS, L.

T. chinensis et T. subarcuata of my previous lists in The Ibis.

Very abundant on the China coast the winter through. They retire northwards on the approach of summer, but return early, often in nearly full summer plumage.

304. TRINGA SCHINZII, Brehm.

Found by Middendorff amongst flocks of the foregoing, 11th August, on south coast of Sea of Ochotsk.

305. TRINGA ACUMINATA.

Totanus acuminatus, Horsf. Linn. Trans. xiii. p. 192. Schæniclus australis, Gould, Birds of Austr. vi. pl. 30.

Allied to *T. pectoralis* of America, but quite distinct. Very common on marshes near Pekin in August. It occurs occasionally on South Chinese coast. I procured a few at Amoy in April and May in almost full summer dress. I suspect their migrations are usually more easterly, to Australia.

306. TRINGA DAMACENSIS.

Totanus damacensis, Horsf. Linn. Trans. xiii. p. 192. Tringa subminuta, Midd. Sib. Reise.

Allied to T. minuta, Leisl., but at once distinguished by its very long toes, and by the brown instead of white shafts to its primaries. Middendorff (Sib. Reis.) procured a pair in summer plumage in Siberia. In that plumage they were similar to T. minuta, except in the distinctions before stated. I have one in winter plumage from Formosa, two in summer from Amoy, and several sent to me by Mr. Blyth from Calcutta labelled T. minuta. I have compared our specimens from China and India, in company with Mr. Tristram, with examples of the European T. minuta, and we are agreed in its decided specific distinction. The true T. minuta occurs only as a straggler in Siberia, where it is replaced by this species, which doubtless thence ranges in winter into Hindostan in great abundance. These birds occur every year in sparse numbers near Amoy, on inland marshes, early in winter and late in spring, during their migrations. T. pusilla, Wils., of America, has longer toes than T. minuta, and seems to form a link between it and this species.

307. Tringa albescens, Temm.

Visits the South China coast in flocks in September, and again in

April and May. It has probably a long way to travel, for in winter it is found throughout the Indian Archipelago and in Australia. In summer its throat and neck become brick-red, and it then looks much like a miniature of the Sanderling (Calidris arenaria). I have in previous lists wrongly referred this species to T. subminuta, Midd.

308. TRINGA SUBARCUATA, L.

A specimen in full red summer plumage received from Tientsin. It is also noted from Amoorland. Its migrations do not appear to extend far south, for I have never met with it on the coast below Shanghai.

309. Tringa temminckii, Leisl.

Common during the winter in South China, on the banks of inland lakes and marshes.

310. Eurinorhynchus pygmæus, Lath.

A large flock of these was observed by Middendorff on the south coast of the Sea of Ochotsk in July.

311. Numenius minutus, Gould, Birds of Austr.

N. minor, Temm. & Schleg. Faun. Jap.

Smaller than N. borealis of America, and quite distinct. It is noted from Amoorland and Japan, whence probably it migrates to winter in Australia. A few occur occasionally on the South China coast. I have a pair shot at Amoy on the 29th of April.

312. Numenius phæopus, L.

Is said to be common in India in winter, whither it probably comes from Siberia, where it occurs in summer, according to Pallas and Middendorff. Temminck notes having procured it from Japan. Hence I include it in my list, though not as yet observed on the Chinese coast.

313. NUMENIUS UROPYGIALIS, Gould, Birds of Austr.

Procured by myself in South-west Formosa in October. Found in Australia and the islands of the Indian Archipelago, in all of which it probably breeds, as I have reason to suppose it does at Formosa. My two specimens are identical with two from Halmaheira, sent me by Professor Schlegel. It differs from the Whimbrel, N. phæopus, in having a brown and white-barred rump, and forms the intermediate link between that species and the brown-and-black rumped N. hudsonicus of America.

314. Numenius ——?

A species smaller than *N. arcuatus*, with long thin bill, allied to *N. tenuirostris* of North Africa, is noted by Cassin (Proc. Acad. Sci. Phil.) from Hakodadi, North Japan. This species has, unfortu-

nately, not been named. Nothing is known of it except from Cassin's short note.

315. Numenius tahitiensis, Gmel.; Cassin in Perry's Expedition to Japan, ii. p. 228.

This species was procured by the members of the American Expedition to Japan under Commodore Perry. It was previously considered peculiar to Otaheite and the islands of the Pacific. Figures and a good description of it are given in the work named. It may have been only a straggler to the Japanese shores; but I include it in my list on the probability of its also occasionally occurring on the shores of China. I strongly suspect, however, that it is identical with the foregoing N. uropygialis.

316. Numenius arcuatus, L.

Visits the coasts of China, as far south as Canton, in large flocks in winter, retiring northwards on approach of summer. Von Schrenck does not note it from Amoorland.

317. Numenius major, Temm. & Schleg. Faun. Jap.

Distinguished from the last by its much longer and heavier bill and by its longer legs. Visits the shores of South China and Formosa in winter, and probably retires to Japan to breed, whence it was originally described.

318. Numenius australis, Gould.

Easily distinguished from *N. arcuatus* and allied species by its barred upper tail-coverts. It is the only Curlew reported from Amoorland. I found it very abundant about the marshes near Pekin in August, but have never observed it on the coasts of South China; hence I should infer that its migrations are in an easterly direction towards Australia, in which country it is found in winter.

319. Numenius Rufescens, Gould, P. Z. S. 1862, p. 286.

Appears to be a local race of the last, being, like it, barred on the rump, but much more rufescent. I found it breeding in North Formosa.

320. Threskiornis melanocephalus, L.?

This is the only known species to which I can liken the black-headed white Ibises that I met in a flock at Talienwan in July 1860 (see The Ibis, 1861, p. 261). It is found in India, and, as is the case with many other Indian species of birds, probably summers in the interior of North China. It has not been recorded by others from Eastern Asia.

321. Ibis nippon, Temm. & Schleg. Faun. Jap.

Breeds probably in Japan, and is found in small parties on the coast near Shanghai and at North Formosa in winter. The immature plumage is grey; that of the adult pure white.

322. PLATALEA MAJOR, Temm. & Schleg. Faun. Jap.

Breeds probably in Japan. A winter visitant to Formosa and the South Chinese coast, as far south as Canton. I have procured it from Swatow.

323. PLATALEA MINOR, Temm. & Schleg. Faun. Jap.

Described from Japan. I have never seen it from China, but it probably occurs on the coast during winter.

324. CICONIA NIGRA, L.

Noted from Amoorland. Said to occur in North China.

325. Ciconia alba, L.

Noted from Amoorland. Said to occur in North China.

326. ARDEA CINEREA, L.

Throughout China to Amoorland, Japan, and in Formosa.

327. ARDEA PURPUREA, L.

Interior of Central China. I have specimens from Hankow. Has also been procured from Japan (Temminck).

328. Herodias alba, L.

Ardea modesta, Gray.

A. syrmatophora, Gould.

Mr. Blyth agrees with me in considering the Great Egret of Europe, Asia, Africa, and Australia the same. It acquires a black bill and long dorsal plumes in summer, in winter the plumes fall away, and the bill of the bird becomes yellow. There is a considerable difference in size between the male and female, the male being much larger. Found throughout China into Amoorland, in Formosa, and probably Japan, though not yet noted from the last place.

329. HERODIAS INTERMEDIA, Wagl.

Ardea egrettoides, Temm.

H. plumifera, Gould, Birds of Austr.

In size this is intermediate between the foregoing and the succeeding. In winter it also has a yellow bill, but that organ is proportionally very short. In summer the bill turns black; it acquires long straight dorsal plumes, not curled upwards as in the next; and the pectoral plumes are like those of the back, not acuminate, thus distinguishing it at once from its near allies. I have a specimen from Hankow, Central China, and have seen it at Tientsin; so I suspect it is widely distributed throughout China. It is also noted from Japan and India, and is probably the same as H. plumifera of Australia.

330. Herodias garzetta, L.

A very lovely bird in full plumage. Very abundant throughout

MR. R. SWINHOE ON THE BIRDS OF CHINA. June 23,

Southern China, as far north as Shanghai, as also in Formosa. Not noted from Northern China, Amoorland, or Japan.

331. HERODIAS EULOPHOTES, Swinhoe, Ibis, 1860, p. 64, et 1863, p. 418.

Sparsely distributed throughout Southern China, but commonest in North Formosa. Allied to the foregoing, but has a yellow bill in summer, the dorsal plumes straight, and the occipital plumes a bunch instead of a few long feathers. In winter it is distinguishable by its very short legs and by its thicker light greenish-yellow bill.

332. Buphus coromandelianus, Scop.

A common summer visitant to South China and Formosa, retiring south on approach of winter. Has been procured, according to Temminck, in Japan.

333. Butorides Javanica, Horsfield.

B. virescens, var. scapularis (Illig.); von Schrenck, Amurland, p. 437.

A summer visitant to China and Amoorland.

334. Ardeola prasinosceles, Swinhoe, Ibis, 1863, p. 421.

A resident species in South China, as far north as Shanghai, extending westwards to Hankow, and southwards probably to Siam. Its nearest ally is the A. speciosa, Horsf., of Java, which, however, in mature plumage has the head and neck orange-buff, with long creamwhite crest-feathers, instead of having the whole a deep maroon colour.

335. NYCTICORAX GRISEUS, L.

A resident species, abundant throughout China from Canton to Pekin, and in Formosa.

336. Nycticorax melanolophus, Raffles.

Ardea goisagi, Temm. & Schleg. Faun. Jap.

From Japan and the Indian Archipelago. I observed a bird resembling this near Tientsin (see The Ibis, 1861, p. 344).

337. Botaurus stellaris, L.

Somewhat sparsely scattered throughout China to Amoorland. I have specimens from Canton and Swatow.

338. Ardetta flavicollis, Lath.

South China, from Canton to Shanghai and in Formosa. A few, I think, stay all the year, though most are summer visitants.

339. ARDETTA CINNAMOMEA, Gmel.

A summer visitant to China, Amoorland, and Japan. A few stay all the year in South China.

340. ARDETTA SINENSIS, Gmel.

Found in summer, from Canton to Tientsin, and in Formosa. On the approach of winter they retire south. I have an undoubted hybrid between this and the last species, procured at Amoy. It curiously combines the characters of both. M. J. Verreaux has mentioned to me an analogous case of a hybrid between A. cinerea and A. purpurea. Temminck refers the small Japanese Bittern to A. minuta, L., of Europe, but I suspect he is wrong in this.

341. Hydrophasianus sinensis, L.

Parra luzoniensis, Gmel.

Interior of Southern and Central China. I have fine specimens in full summer plumage from Hankow.

342. Gallicrex cristatus, Lath.

I consider this bird a summer visitant to South China, from Canton to Shanghai, and also to Formosa. I have specimens in full summer plumage from Hankow; and it was shot by Captain Blakiston's party at Foochow in Szechuen, 1700 miles up the Yangtzse, in May, in a wheat-field near no water.

343. GALLINULA CHLOROPUS, L.

A resident species throughout China and Formosa. Specimens from there are identically the same as European ones. The Japanese form is said to vary somewhat.

344. GALLINULA PHŒNICURA, Penn.

This is I think a summer visitant to China. It is not uncommon during that season from Canton to Tientsin, and in Formosa.

345. Porzana fusca, Shaw.

P. erythrothorax, Temm. & Schlegl. Faun. Jap.

Identical with Indian examples. Varies much in size. Found throughout China, Japan, and Formosa.

346. PORZANA MINUTA, Pall. (P. pusilla, Gmel.).

This species is given by Temminck from Japan.

347. Porzana pygmæa, Naumann.

Gallinula bailloni, Vieill.

Procured from Tientsin, and is probably found throughout Central China, as it is throughout Hindostan. Japan (Temminck).

348. ORTYGOMETRA CREX, L.

Said to have been procured from China. I have never met with the bird there.

349. RALLUS STRIATUS, L.

Procured in Formosa, identically the same with Indian and Malayan specimens. It probably also ranges throughout Southern China.

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350. RALLUS AQUATICUS, L.

Identical with British examples, except in its having a thicker bill. Specimens received from Tientsin. It probably ranges throughout Northern and Central China. It occurs also in Japan. The Indian race has a thicker bill, and more distinct white striæ on the upper wing-coverts.

351. FULICA ATRA, L.

Found throughout China, but commoner in the northern half, from Shanghai to Pekin. From the last-named and from Hankow I have specimens identical with the European bird. Occurs also in Japan.

ANSERES.

352. Podiceps minor, Gmel.

P. philippensis, Gmel.

Found throughout China and Formosa. In cold, many leave the ponds of the interior and take to the sea. In full plumage, identical with European specimens.

353. Podiceps Rubricollis, Lath.

P. subcristatus (Jacq.), von Schrenck, Amurland, p. 493.

P. rubricollis major, Temm. & Schleg. Faun. Jap.

Lakes of North China, up to Amoorland, and in Japan. I have never met with it on the coast.

354. Podiceps auritus, L.

Lakes of Central and Northern China, appearing on the southern coast in severe winter seasons. Japan (von Schrenck). I have a specimen from Amoy.

355. Podiceps connutus, Lath.

North China to Amoorland. Visits the south coast in winter. I have a specimen from Amoy.

356. Podiceps cristatus, L.

P. cornutus, Pall.

Very common. In winter large numbers appear on the southern coast. Kamtschatka and Japan (Temminck).

357. COLYMBUS SEPTENTRIONALIS, L.

Very common on the southern coast in winter.

358. COLYMBUS GLACIALIS, L., var. adamsii, Gray. Sea of Ochotsk (Midd.).

359. COLYMBUS ARCTICUS, L.

Amoorland (von Schrenck); said to visit the north coast of China.

360. Mergus albellus, L.

North China in winter. Abundant in the Tientsin market.

361. MERGUS SERRATOR, L.

Common throughout China.

362. Mergus merganser, L.

North China. Abundant in markets at Tientsin in winter. It is probably also a summer bird in the large marshes of that neighbourhood.

363. Cygnus musicus, Bechst.

Visits North China and Japan in winter (Temm.).

364. Cygnus minor, Pall.

C. bewickii, Yarr.

Commoner than the foregoing. Comes down in winter occasionally as far south as Canton.

365. Anser cygnoides, L.

A large wild Goose, answering to von Schrenck's description of the so-called stock of the Chinese domestic Goose, visits the shores of North China in winter, and is frequently procurable in the market; but it has no distinct knob on the bill.

366. Anser hyperboreus, Pall.

Sea of Ochotsk (Midd.); Japan and Kamtschatka (Temm. & Sieb.).

367. Anser grandis, Gmel.

Shanghai in winter.

368. Anser segetum, Gmel.

Down to Canton in winter.

369. ANSER FERUS.

A. cinereus (Meyer & Wolf); von Schrenck.

To Canton in winter.

370. Anser albifrons, Penn.

All these are procurable during winter in the Shanghai and Tientsin markets.

371. Anser Erythropus (Linn.) (A. minutus, Naumann); Midd. Sib. Reise.

372. Anser Leucopsis, Bechst.; Midd. Sib. Reise.

373. Anser Bernicla, Ill.; Midd. Sib. Reise.

374. Anser Ruficollis, Pall.; Midd. Sib. Reise.

375. ANSER BRENTA, Pall.

Sea of Ochotsk (Midd.).

376. AIX GALERICULATA, L.

Found in the lakes of Central China and neighbourhood of Ningpo in winter. Said to breed in Amoorland.

- 377. TADORNA VULPANSER, Linn.
- 378. CASARCA RUTILA, Pallas.
- 379. Anas Boschas, L.
- 380. Anas pecilorhyncha, Temm.
- 381. Anas glocitans, Pall.
- 382. Anas falcaria, Pall.
- 383. ANAS CRECCA, L.
- 384. Anas querquedula, L.
- 385. Anas strepera, L.; Midd. Sib. Reise.
- 386. Anas acuta, L.
- 387. Anas penelope, L.
- 388. Anas stelleri, Pall. (Midd. Sib. Reise).
- 389. Anas Clypeata, L.
- 390. Anas spectabilis, L. (Midd. Sib. Reise).
- 391. Anas Histrionica, L. (von Schrenck).
- 392. Anas clangula, L.
- 393. Fuligula marila, L.
- 394. Fuligula cristata, Leach.
- 395. ŒDEMIA NIGRA, L. (A. atra, Pall.).

North and East Siberia (Pallas). Japan (Temminck).

396. ŒDEMIA AMERICANA, Swainson.

Shot by Captain Blakiston's party at Chinkiang, on the Yangtsze, in winter.

397. ŒDEMIA FUSCA, L.

Amoorland (Midd.).

398. HARELDA GLACIALIS, L.

Amoorland (Midd.).

399. Phalacrocorax carbo, L.

Graculus carbo, L.; Cassin, Perry's Exped. ii. p. 239.

At Yeddo in April.

I can find no special points of difference between my Amoy spe-

cimens and the English bird. It only winters in South China, returning to the north and Amoorland to breed.

400. Phalacrocorax capillatus, Faun. Jap. pl. 83.

Carbo filamentosus, Temm. & Schleg. Faun. Jap. p. 129.

This species from Japan is recognized as distinct by Temminck, and well described and figured in the 'Fauna Japonica.' I admit it on the authority of that work, though I have never met with it in China.

401. PHALACROCORAX BICRISTATUS, Pall.

Sea of Ochotsk (Midd.). Also Japan, according to Temminck and Schlegel, 'Fauna Japonica,' where it is described and figured. A straggler was procured one winter at Amoy, South China.

402. Pelecanus onocrotalus, L.

Said by Temminck to have been procured in Japan. From East Europe and Hindostan.

403. Pelecanus philippensis, Gmel.

This bird visits the south coast of China during winter in small parties.

404. Sula fusca, Shaw.

A bird from Shanghai is of this species. I have never met with it on the Chinese coast. It is recorded in the 'Fauna Japonica' from Japan.

405. LARUS NIVEUS, Pall.; Bp. Consp. Av. ii. p. 224.

L. canus, var. major, Midd. Sib. Reise.

The Eastern representative of *L. canus*, with larger and stronger bill; irides yellowish grey; eyelids red; bill unspotted, greenish yellow; legs yellowish green. Is found in Kamtschatka and Northeastern Asia, visiting the south coast in winter. I have several from Amoy in all plumages, and one without a hind claw. The immature birds that reach us have always the back more or less grey, proving the plumage completed in two years.

406. LARUS TRIDACTYLUS, VAT. BRACHYRHYNCHUS.

Rissa brachyrhyncha, Gould.

Gavina citrirostris, Bruch.; Bp. Consp. Av. ii. p. 226.

The Eastern representative of Rissa tridactyla, L. Found in Kamtschatka. Not yet procured in China. Thus distinguished by Bonaparte:—"Minor: alba, pallio plumbeo-cano: remigibus primariis griseis, nec intus albis, extimis duabus apice late nigris; tertia, quarta et quinta fascia subapicali nigra; sexta macula tantum nigra in pogonio externo: rostro brevi, robusto, incurvo, flavissimo: pedibus rubro-flavis.

"Long. 14 poll. Rostr. $1\frac{1}{3}$. Al. 12 poll. Caud. $4\frac{1}{2}$. Tars. 1 poll."

407. LARUS CRASSIROSTRIS, Vieill.

L. melanurus, Temm. & Schleg. Faun. Jap.

Albus, dorso alisque fusco-cinereis; remigibus primariis nigris, ceteris cum tectricium apicibus albis; cauda alba, fascia subterminali latissime nigra: rostro validiusculo, flavido, apice nigro annulato: pedibus fusco-carneis.

Long. 17 poll.

This species breeds in Japan and Talienwan, repairing in large numbers to the South China coast. In full plumage it can always be distinguished from L. niveus by its black tail-band, its much darker mantle, and by its large bill, banded at the end with black and crimson. The immature are very much browner than those of the other bird. The different stages of its plumage have been well figured in the 'Fauna Japonica.' I have numbers of specimens from various parts of China,

408. LARUS GLAUCESCENS, Licht.; Bp. Consp. Av. ii. p. 216.

L. glaucus, Brünn.; Midd. Sib. Reise.

L. brachyrhynchus, Gould.

Ex Ocean. Pac., Arct. et Kamtschatka. Not yet met with on the coasts of China or Japan. Simillimus L. glauco, sed minor (long. 2 ped.), et remigibus perlaceis, nec nigris nec albis, apice tantum candidis: rostro flavo, angulo mandibulæ aurantiaco.

409. LARUS LEUCOPTERUS, Faber; Midd. Sib. Reise.

A small form of the preceding (length 20 inches), with comparatively longer wings, said by Middendorff to occur also in North-east Asia.

410. LARUS OCCIDENTALIS, Aud. Synop. Birds of Am. p. 328.

"Bill robust, compressed, yellow, with an orange-red patch toward the end of the lower mandible; iris light hazel; feet flesh-coloured; head, neck, lower parts, rump, and tail pure white; back and wings light greyish blue, of a deeper tint than in L. argentatus; edges of the wings and extremities of the quills white; first seven quills greyish black toward the end, that colour including the outer webs and the greater part of the inner of the two first, and on the rest gradually diminishing, so as on the seventh merely to form a subterminal bar; the first quill with a patch of white on both webs near the end; the tips of all white.

"This species, which is very intimately allied to Larus argentatus, is remarkable for the great depth and comparative shortness of its

bill."—Aud.

Length 27 inches; wing $18\frac{1}{2}$; tail $8\frac{1}{4}$; bill, along culmen, $2\frac{1}{2}$;

height at angle $\frac{9}{10}$.

The above description answers exactly to the large form of Gull, allied to *L. argentatus*, that visits our southern coasts in winter. I have frequently procured them at Amoy in that season in all stages, but more frequently in the immature. It is the West American re-

presentative race, extending probably to Kamtschatka, whence, doubtless with many other sea-birds, it wends southwards down our line of coast. I have two in very complete plumage. From observation, I should say that these birds require full three years for change into adult attire.

411. LARUS CACHINNANS, Pallas.

L. argentatus, var. major, von Schrenck.

Amoorland.

Length $22\frac{1}{2}$ inches; wing $16\frac{1}{2}-18$; tail 7; tarsi $2\frac{1}{2}$; bill, along

culmen, $2\frac{1}{4}$; height at angle $\frac{7}{10}$.

This smaller representative of L. argentatus bears to the preceding species the same relation that L. leucopterus does to L. glaucus, its wings being relatively longer. It is a commoner winter visitant than the former to Amoy, whence I have procured several both adult and immature. It has a darker more slaty back than L. argentatus, and is considered by some an intermediate link between that species and L. fuscus. It summers in N.E. Asia. Specimens vary a good deal in size and proportions, but I have never procured any exactly intermediate between the largest of this and the smallest of L. occidentalis.

412. CHROICOCEPHALUS ICHTHYAËTOS, Pall.

This monster black-capped Gull is noted by Cassin as procured at Hakodadi (see Perry's 'Expedition to Japan,' vol. ii. p. 252). It is said to be a bird of the Caspian and Red Seas, and to occur abundantly in the Bay of Bengal. It is not stated to be found in Amoorland or Kamtschatka; but it possibly makes its way to Japan, following the course of the warm Gulf-stream.

413. Chroicocephalus brunneicephalus, Jerdon.

L. ridibundus, var. major, Midd. Sib. Reise.

The Siberian and Japanese bird would appear, from descriptions, to be the same as the Brown-hooded Gull of India. Its range extends to Kamtschatka. I have a specimen from India, forwarded to me by Mr. Blyth.

414. Chroicocephalus capistratus, Temm.

Larus brunneicephalus, Cassin, Perry's 'Expedition to Japan,' vol. ii. p. 232.

This comes to Amoy in the winter. I have one from Amoy, and another from Macao; and Cassin notes the occurrence of a similar bird from Hakodadi. It is smaller than the European C. ridibundus, and has a more slender bill, and is doubtless its representative in the East. It answers well to the description of C. capistratus, Temm., which has occurred in Great Britain, and which Mr. Tristram and others are inclined to believe is only a variety of C. ridibundus. The specimens, however, that have occurred in Europe might possibly have been stragglers from the East.

415. CHROICOCEPHALUS KITTLITZII, Licht.

Easily distinguished by its short, thick, black bill. It acquires a deep-black hood in summer. I have it in both summer and winter plumage from Amoy, where it occurs in large numbers the winter through, ascending rivers at fall of tide in search of mollusks and small crustaceans. It is said to summer in Kamtschatka and N.E. Asia.

- 416. CHROICOCEPHALUS SABINII, Leach.
- 417. Chroicocephalus minutus, Pall.

Both birds of the British lists. I introduce them from the fact of Middendorff stating that they occur on the shores of the Sea of Ochotsk.

- 418. Lestris pomarina, Temm.
 - Said by Middendorff to occur on the shores of the Sea of Ochotsk. None of them have
- 419. LESTRIS PARASITA, Boie.
- yet been obtained in China.
- 420. Lestris Buffonii, Boie.
- 421. RHYNCHOPS ALBICOLLIS, Swainson.

Southern Ocean. Said occasionally to occur on the coast of Southern China.

422. Sylochelidon caspia.

Sterna caspia, Latham.

Sylochelidon strenuus, Gould, B. of Austr.

Visits the coasts of China in winter. I have specimens from Amoy.

423. GELOCHELIDON ANGLICA.

Sterna anglica, Montagu.

Said to wander occasionally to the coast of South China in winter.

424. Hydrochelidon indica.

Viralva indica, Stephens.

Sterna hybrida, Pallas.

S. leucopareia, Natterer.

A common resident on the marshy plains of S.W. Formosa. I have not observed it elsewhere in China.

425. HYDROCHELIDON NIGRA.

Sterna nigra, L.

S. fissipes, Pall.

S. leucoptera, Temm.

Found throughout China, into Amoorland. I have a specimen in full summer plumage from Amoy, and several in a variety of plumages from near Pekin.

426. THALASSEUS CRISTATUS.

Sterna cristata, Stephens.

S. pelecanoides, King.

S. velox, Rüppell.

Seas of Southern China. Numbers breed yearly on the rocks of North Formosa.

427. STERNA MACRURA, Naum.; Midd. Sib. Reise.

Said to occur in N.E. Asia.

428. Sterna fuliginosa, Temm. & Schleg. Faun. Japon.

Procured as yet only from Japan.

429. Sterna hirundo, L.

S. fluviatilis, Naumann.

Central China; never yet observed on the coast. I have a specimen from Hankow.

430. STERNA LONGIPENNIS, Nordmann; von Schrenck, Amurland, Vögel, p. 512.

From Amoorland, probably descending into North China. I have never met with it. Allied to the last, but with black bill and longer wings.

431. STERNULA MINUTA, L.

Visits the Chinese coast in winter. I have specimens from Amoy.

432. Sternula sinensis, Gmel.; Swinhoe, Ibis, 1863, p. 429.

S. sumatrana, Raffles.

A common summer species in Formosa, breeding in large numbers on the precipitous rocky coast on the eastern side of the island. I have also specimens in various stages of plumage from Hankow, showing that it also breeds in Central China. I have never met with it on the Chinese coast; but from its being found in the Malayan archipelago, I should fancy that it migrates thither in winter.

433. Anous stolidus.

Sterna stolida, L.

Found in South China Sea; breeds on the eastern rocks of Formosa, whence I have a pair.

434. DIOMEDEA BRACHYURA, Temm. Seas of Southern China, 435. DIOMEDEA NIGRIPES, Audubon. These are the only two species of Albatros found north of the line. For remarks on them, see Ibis, 1863, p. 431.

436. PROCELLARIA GLACIALIS.

Procellaria glacialis, L., var. pacifica, Aud.; Bp. Consp. Av. ii. p. 187.

Kurile Islands and Amoorland.

437. PROCELLARIA DESOLATA, Gm.; Bp. Consp. Av. ii. p. 189. Kamtschatka.

438. THALASSIDROMA LEACHII, Temm.; Bp. Consp. Av. ii. p. 195. Amoorland.

439. NECTRIS TENUIROSTRIS, Temm.; Bp. Consp. Av. ii. p. 202. *Puffinus tenuirostris*, Faun. Jap. pl. 86. Corea and Japan.

440. Puffinus Leucomelas, Temm.; Bp. Consp. Av. ii. p. 205. Procellaria æquinoctialis, Pall. Japan (Temm. Pl. Col. 587).

441. URIA ANTIQUA, Penn.

U. senicula, Pall.

Synthliboramphus antiquus, Brandt.

Amoorland (v. Schrenck), Japan (Faun. Jap.).

442. URIA UMIZUSUME, Temm. & Schl. Synthliboramphus temminckii, Brandt. Japan (Faun. Jap.).

443. URIA (CEPPHUS) CARBO, Pall.; von Schrenck, Amurland, p. 496.

Amoorland.

444. URIA (CEPPHUS) COLUMBA, Pall.

Sea of Ochotsk.

445. URIA (CEPPHUS) LOMVIA, Brünn.

Sea of Ochotsk.

446. ALCA TORDA, L.

Japan (Faun. Jap.).

447. CERATORHYNCHA MONOCERATA.

Alca monocerata, Pall.

Hakodadi, North Japan (Cassin, Perry's Exped. ii. p. 233).

448. Phaleris cristatella, Pall.; von Schrenck, p. 500. Amoorland.

449. PHALERIS MYSTACEA, Pall.

Sea of Ochotsk, Japan (Cassin).

450. PHALERIS TETRACULA, Pall.; Midd. Sib. Reise.

N. E. Asia.

451. Ombria psittacula, Pall.; Midd. Sib. Reise.

South Sea of Ochotsk.

452. Mormon cirrhatum, Pall.; von Schrenck, p. 503.

Amoorland.

453. Mormon corniculatum, Kittlitz; Midd. Sib. Reise.

South coast and islands of Sea of Ochotsk.

454. Mormon glaciale, Leach.

Kamtschatka, Kurile Islands, and Saghalien (Midd.).

In the above list, down to No. 254 (Otis tarda), I have restricted myself to those birds that I know from personal observation, or believe on reliable evidence, to occur in China limited—that is, from Canton to the borders of Mantchuria. Beyond that number, I have included all the species that I have been able to find recorded from North-eastern Asia and its islands. These are chiefly sea-birds, which, as every naturalist knows, are of an erratic nature, and often in severe winters turn up in very low latitudes on the same line of coast. I have in every case quoted the authority for the localities given.

For the sake of comparison with the land-birds of China, I subjoin comparative lists of the land-birds of Japan, Amoorland, and Formosa. My authorities for the first of these have been the 'Fauna Japonica,' Cassin's articles in Perry's 'Expedition to Japan' and in the 'Proceedings of the Academy of Natural Sciences of Philadelphia,' and Captain Blakiston's two papers in The Ibis*. For the second I have resorted to Middendorff's 'Sibirische Reise' and von Schrenck's 'Amurland.' The third I have added from my articles on the Ornithology of Formosa in The Ibis, 1863, pp. 198, 250, 377.

The lists are as complete as I have been able, with these references, to make them. In the Japanese list, those marked "(Temminck)" are inserted from von Schrenck's "Schlussfolgerungen," at the end of his 'Birds of Amoorland; and I am therefore not responsible for the authority. There are some birds so given which I cannot believe to be Japanese; these I have marked with notes of surprise. Thaumalea picta is certainly not a Japanese bird. I have, however, thought it best for the present to leave them as they stand for the criticism of future explorers.

^{*} See The Ibis, 1862, p. 309, and 1863, p. 97.

3	32		MI	R. R.	swini	ioe (ON TH	E BI	RDS OF	CHINA	. [Ju	ne 23,
No.			ତୀ	ಣ	4	200	٥	~ ∞	60	11	12	
FORMOSA.		Pandion haliaëtus, L	Buteo japonicus, T. & S	Milvus melanotis, T. § S.	Falco peregrinus, L.		Spizaeros orientalis, 1. g. S.	Accipiter gularis, T. g. S. Circus spilonotus, Kaup	Ninox japonicus, T. & S. Athere mardelets Swimbor	Scops semitorques, T. & S.	Bubo caligatus, Swinhoe	
No.	_ c	1 to 41	က်တေ	~ ∞≎	21	12	27	15 16 17	18	19	22 23	22
JAPAN.	Aquila chysaëtos, L.?	Tranaecos aroicina, L. —— pelagica, Pall. Pandion haliaëtus, L.	Buteo poliogenys, T. & Sjaponicus, T. & S	——hemilasius, T. & S. Pernis apivorus, L. Milvus melanotis, T. & S.	Falco candicans, $Gmel.$ — peregrinus, $L.$	Tinnunculus japonicus, Ep	Astur palumbarius, L	Circus cyaneus, L.	Ninox japonieus, T. & S.	Asio brachyotus, L . Scops semitorques, T . & S .		Syrnium aluco, L. (Temminck) Strix flammea, L. (Temminck)
No.	<u></u> — с	1 ಲ 4		ro	⊕ ~ ∞	9	112	13	15	16	18	3
AMOORLAND.	:	—— pelagica, Pall. Pandion haliaëtus, L.		Milvus melanotis, T. & S.	Falco candicans, Gmel. —— peregrinus, L. subbuteo, L.		Astur palumbarius, L	Circus cyaneus, L.	Nyctea nivea, Daud. Glaucidium passerinum, L.	Asio otus, L. ———————————————————————————————————	Bubo maximus, Siebold Ulula uralensis, Pall	Lyctale funerea, Lath

186	3.]	MR. R. S	SWINHOE O	N THE B	IRDS OF	CHINA.		333
No.	13 14 14	16	13	828	क्षस	क्ष		26 27
FORMOSA.	Caprimulgus stictomus, Swinkoe Cypselus vittatus, T. &. S. enhfinzetus, R. M. & S.	Cuculus canorus, L. — kelungensis, Swinhoc		Picus insularis, Gould Raleënsis, Swinboe Megalæma nuchalis, Gould	Halcyon coromandelianus, Scop.	Parus castaneiventris, Gould		Alcippe morrisonia, Swinhoe
No.	25	27	8888	32	8 4 5	82888	444	#
JAPAN.	Caprimulgus jotaka, T. g. S.	Upupa epops, L. Cuculus canorus, L.	Yunx torquilla, L. Gecinus awokera, T. & S. Dryocopus martius, L. (Blakiston)	Picus leuconotus (Blakiston) —— kisuki, T. & S.	Halcyon coromandelianus, Scop. Alcedo bengalenis, Lath. Ceryle lugubris, T. & S.	Coracas garrula, L. (Temminck) Certhia familiaris, L. Sitta rosellia, Bp. Parus varius, T. & S. minor, T. & S.	ater, L. Glakiston) !!—— cæruleus, L. (Temminck) —— kamtschatkensis, Bp. (Blakiston)	Mecistura trivirgata, T. & S.
No.	28	848	88888		8 4 E	35	388	9
AMOORLAND.	Nyctale barbata, Pall. (Midd.) Caprimulgus jotaka, T. & S.	Acanthylis caudacuta, Lath. Upupa epops, L. Cuculus canorus, L.	Hierococcyx fugax, Horsf. Yunx torquilla, L. Gecinus canus, L. Dryocopus martius, L. Picus maior, L.	—— minor, L. ———————————————————————————————————	Apternus fridactylus, L Alcedo bengalensis, Lath	Certhia familiaris, L . Sitta europæa, L .(?)	Parus ater, L. cyanus, Pall. kamtschatkensis, Bp.	Mecistura caudats, L.

334	7	AR. R. S	WINHOE	ON THE	BIRDS OF CHI	NA. [June 23,
No. 28	83	8555	3488	88844	33444	5 4 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
Formosa. Alauda cælivox, Swinhoe	Anthus cervinus, Pall.	— agilis, Sykes — richardi, Vieill. Budytes laivana, Swinkoe Mortseilla, bosmila, T	— japonica, Swinkoe — japonica, Swinkoe — Luconiensis, Scop. Cinclus pallasi, Tenm	Hypsipetes nigerrimus, Gould. Ixos sinensis, Gmel. Spizixos semitorques, Swinhoe. Oreocincle, hancii, Swinhoe.	Turdus chrysolaus, T. & S. —— daulias, T. & S. —— pallens, Pall. —— fuscatus, Pall. —— naumanni, Temm.	Petrocincla manilensis, Bodd. Oriolus chinensis, L. Psaropholus ardens, Swinhoe Herpornis xanthochlora, Hodgs. Garrulax taiyanus, Swinhoe — ruficeps, Gould.
No.	3448	521 22		55 55	62 65 55 57 56 57 57 57 57 57 57 57 57 57 57 57 57 57	86.44
JAPAN. Alauda japonica, T. & S.	Otocorys alpestris, L. Anthus aquaticus, Beckst. (Temm.) cervinus, Pall. (Temm.)	gaponea, r. q. o. agilis, Sykes ? Budytes rayii, Yarr. Motacilla hoamla I	— japonica, Swinkoe Cinclus pallası. Temm.	Microscelis amaurotis, T. & S. Oreocincla heinei. Bn.	Turdus sibiricus, Pall. — cardis, T. & S. — chrysolaus, T. & S. — daulias, T. & S. — pallens, Pall. — naumanni, Temm. (Blakiston)	Merula mandarina, Bp. Petrocincla manilensis, Bodd.
No. 41	3344	3 4 4 8	55 50		25 4 5 25 4 5	26
	t. (Midd.)!	—— agliis, Sykes Budytes flava, L. Motacilla, boarula, L.	— ocularis, Swinkoe — luzoniensis, Scop. Ginclus pallasi, Temm.		Turdus chrysolaus, T. & S. —— daulias, Temm. —— fuscatus, Pall. —— naumanni	Oriolus chinensis, L.

336	MK	. R. swi	NHOE O	N TH	E BIRD	SOF	CHINA.	[June	23,
No. 75	92	2323	8 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3	85	88 88 88	89		8	
Formosa. Calliope kamtschatkensis, Gmel.	Calamoherpe orientalis, T . $\&$ S .	— canturians, Swinkoe — minuta, Swinkoe Drymcca extensicanda, Swinkoe flavinostris, Sminkoe	Suya striata, Swinkoe Prinia sonitans, Swinkoe Cisticola scheenicola, Bp.	Phyllopneuste fuscata, Blyth	— coronata, T. & S sylvicultrix, Swinhoe	Zosterops simplex, Swinhoe		Chlorospiza sinica, L .	
%3.8 83.83 83.83	84	85 86	87	88	83	858	8488	88	
JAPAN. Calliope kamtschatkensis, <i>Gmel.</i> Locustella hendersonii (<i>Cussin</i>) — ochotensis (<i>Midd.</i>) (<i>Blakiston</i>)	Calamoherpe orientalis, T. & S.	cantans, T. & S. cantillans, T. & S.	Cisticola schænicola, Bp.	!!Sylvia atricapilla, L. (Temm.)	Phyllopneuste coronata, T. & S.	Regulus japonicus, Bp. Zosterops japonicus, T. & S. Ampelis Parrula, L.	Fringilla montfringilla, L. (Temm.) Cannabina linaria, L. (Temm.) Chrysomitris sninns, L. (Temm.)	Chlorospiza sinica, L. — kawariba, T. & S.	
No. 252.25	£ 8	8		81	<u> </u>	85.5 4.8 8.8 8.8 8.8	98888	6	333
Calliope kamtschatkensis, Gmel. Locustella hendersonii, Cassin — ochotensis, Midd	Calamoherpe bistrigiceps, Swinhoe			Phyllopneuste fuscata, Blyth	— borealis, Blasius Reguloides superciliosa, Grael.	Regulus cristatus, L Zosterops erythropleurus, Swinhoe	Fringilla montifringilla, L. Cannabina Inaria, L. Chursomitris grinus, L. Chursomitris grinus, L.	Carpodacus erythrinus, Pall.	Corythus enucleator, L.

1863.]

MR. R. SWINHOE ON THE BIRDS OF CHI	INA	١.
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3	38	м	R. R. SWINHOE ON THE BIRDS OF CHIN	A. [June 23,
Formosa.	Garrulus insularis, Gould 106	Corvus sinensis, Gould	Turtur rupicola, Pall. ——chinensis, Scop. ——humilis, Temm. Treron formosa, Swinkoc. 111 Phasianus torquatus, var. Euplocamus swinhoii, Gould.	
JAPAN. NO.	Garrulus brandti, Eversm. (Blakiston) . 123		J. (Blak.) J. (Temm.) J. (Temm.) J. (Asson) Kiston) S. S. Megel	!!Thaumalea picta, L. (Temm.) !!Perdix rubra, Briss. (Temm.) !!Bedix rubra, Briss. (Temm.) !38 Coturnix dactylisonans, var. 139
AMOORLAND. No.	Garrulus brandti, Eversm 116	adl. chleg Fould		Thaumalea picta, L. 134 Otis tarda, L. 135